

IMMC 2016



45 Years
and
Beyond

18th International Metallurgy and Materials Congress

29 Sept. - 01 Oct. 2016

TÜYAP Fair, Convention & Congress Center
ISTANBUL - TURKEY

UCTEA CHAMBER OF METALLURGICAL
AND MATERIALS ENGINEERS

CONGRESS PROGRAMME & ABSTRACTS BOOK
KONGRE PROGRAM ve ÖZET KİTABI



Simultaneous Congresses with IMMC 2016;

| 8th International Ankiros Foundry Congress |

| ANKIROS 2016 ANNOFER 2016 TURKCAST 2016 |



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18th International Metallurgy and Materials Congress

18. Uluslararası Metalurji ve Malzeme Kongresi



UCTEA CHAMBER OF METALLURGICAL AND MATERIALS ENGINEERS
TMMOB METALURJİ ve MALZEME MÜHENDİSLERİ ODASI

**IMMC
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**18th International
Metallurgy and Materials
Congress**

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IMMC
2016**18th International
Metallurgy and Materials
Congress**

Symposiums and Organization Committee Members Sempozyumlar ve Yürütme Kurulu Üyeleri

Iron and Steel Metallurgy Symposium Demir Çelik Metalurjisi Sempozyumu

Tamer BIÇAKLI	İzmir Demir Çelik Sanayi A.Ş.
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Casting Symposium / Döküm Sempozyumu

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Ceramic, Glass, Refractory and Composite Materials Symposium Seramik, Cam, Refrakter ve Kompozit Malzemeler Sempozyumu

Prof. Dr. Filiz ÇINAR ŞAHİN	İstanbul Technical University
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Prof. Dr. Alpagut KARA	Anadolu University
Prof. Dr. Figen KAYA	Yıldız Technical University
Dr. Kağan KAYACI	Kale Ar-Ge Merkezi

Energy Materials Symposium / Enerji Malzemeleri Sempozyumu

Yavuz AYDIN	GE Power & Water
Assist. Prof. Dr. Rezan DEMİR-ÇAKAN	Gebze Technical University
Assoc. Prof. Dr. Özgül KELEŞ	İstanbul Technical University

Nanomaterials Symposium / Nanomalzemeler Sempozyumu

Prof. Dr. Sebahattin GÜRMENT	İstanbul Technical University
Prof. Dr. Cengiz KAYA	Yıldız Technical University
Assoc. Prof. Dr. Kürşat KAZMANLI	İstanbul Technical University
Assoc. Prof. Dr. Burak ÖZKAL	İstanbul Technical University

Symposiums and Organization Committee Members Sempozyumlar ve Yürütme Kurulu Üyeleri

Biomaterials Symposium / Biyomalzemeler Sempozyumu

Assist. Prof. Dr. İpek AKIN	İstanbul Technical University
Prof. Dr. Iulian ANTONIAC	University Politehnica of Bucharest, Romania
Prof. Dr. Simona CAVALU	University of Oradea, Romania
Prof. Dr. Caner DURUCAN	Middle East Technical University

Non-Ferrous Metallurgy Symposium Demir Dışı Metaller Metalurjisi Sempozyumu

Dr. Murat ALKAN	Dokuz Eylül University
İlhan GÖKNEL	Eczacıbaşı Esan End. Hammaddeler San. Tic. A.Ş.
Prof. Dr. Ali Arslan KAYA	Muğla Sıtkı Koçman University
Prof. Dr. Gökhan ORHAN	İstanbul University
Vedat SANCAKDAR	ASAŞ Alüminyum San. ve Tic. A.Ş.
Assist. Prof. Dr. Ahmet TURAN	Yalova University

Environment, Occupational Safety and Sustainability Symposium Çevre, İş Güvenliği ve Sürdürülebilirlik Sempozyumu

Müzeyyen GENCER	METEM
Assist. Prof. Dr. M. Şeref SÖNMEZ	İstanbul Technical University
Prof. Dr. Servet TİMUR	İstanbul Technical University

Materials Degradation and Protection Methods Symposium Malzemelerin Bozunumu ve Korunma Yöntemleri Sempozyumu

Assoc. Prof. Dr. Özgür BİRER	Koç University
Prof. Dr. Nuran CANSEVER	Yıldız Technical University
Assoc. Prof. Dr. Emrah ÜNALAN	Middle East Technical University
Prof. Dr. Mustafa ÜRGEN	İstanbul Technical University

Materials Characterization Symposium Malzeme Karakterizasyonu Sempozyumu

Prof. Dr. Gültekin GÖLLER	İstanbul Technical University
Prof. Dr. Mehmet Ali GÜLGÜN	Sabancı University
Assoc. Prof. Dr. Y. Eren KALAY	Middle East Technical University
Prof. Dr. Servet TURAN	Anadolu University

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UCTEA CHAMBER OF METALLURGICAL and MATERIALS ENGINEERS

The Chamber of Metallurgical and Materials Engineers (CMME) is a non-profit state agency founded in 1970 and is one of twenty-four Chambers of Union of Chambers of Turkish Engineers and Architects.

The main functions of CMME are to organize required and necessary activities and conduct studies in broad fields of production, shaping, improving properties, destructive and non-destructive testing of metallic and nonmetallic materials, and also introducing the new technologies and the knowledges for the use and benefits of the members of CMME and the country.

Within this context CMME publishes a bimonthly journal entitled "METALURJİ" and a bulletin called "E-BULTEN" in which news related to metallurgy and materials science appear. CMME also organizes seminars, symposiums, panels, forums, congresses and fairs. Board of directors of CMME organized METEM (The Center of Vocational and Technical Education) to help vocational and technical improvement of the members.

The supreme governing body of CMME is the General Assembly which consists member of the Chamber is collected biannually. Board of Directors is elected at the General Assembly is responsible from the execution of the functions mentioned above. Additionally, detailed studies on certain specific subjects are conducted by "work groups" that consist of specialists from universities, research institutions and the industry and established by the Board of Directors.



TMMOB METALURJİ ve MALZEME MÜHENDİSLERİ ODASI

Türk Mühendis ve Mimar Odaları Birliği'ne bağlı 24 Oda'dan biri olarak ilgili yasa hükümlerine uygun şekilde 1970 yılında kurulan Metalurji Mühendisleri Odası, kamu kurumu niteliğinde bir meslek kuruluşudur.

Ülke ve Oda üyelerinin hak ve yararları gözetilerek, metal ve metal dışı malzemelerin üretimi, şekillendirilmesi, özelliklerinin geliştirilmesi, hasarlı ve hasarsız kontrolleri vb. alanlarda, ihtiyaç duyulan ve gerek görülen etkinliklerin organizasyonu ve çalışmaların yapılması, sektörümüzde yapılan çalışmaların, yeni teknolojilerin ve bilgi birikiminin çeşitli araçlarla meslektaşlarımıza ve sektör mensuplarına duyurulması, üyelerin durumlarının iyileştirilmesi, oda amaçlarının temelini oluşturmaktadır.

Bu amaçlar doğrultusunda Metalurji ve Malzeme Mühendisleri Odası iki ayda bir "METALURJİ" dergisini ve Oda faaliyetlerinin, sektörel haberlerin güncel şekilde aktarıldığı "E-BÜLTEN"i yayınlamakta ve seminer, sempozyum, panel, forum, kongre, fuar gibi etkinlikler organize etmektedir. Oda Yönetim Kurulumuz üyelerimizin mesleki ve teknik gelişimine yardımcı olmak amacıyla METEM (Mesleki Teknik Eğitim Merkezi)'ni kurmuştur.

İki yılda bir yapılan ve Odaya kayıtlı üyelerin katılımıyla gerçekleştirilen Genel Kurul en üst organdır. Genel Kurul'da seçilen Oda Yönetim Kurulu yukarıda bahsedilen çalışmaların yürütülmesinden sorumludur. Ayrıca, Oda Yönetim Kurulunca oluşturulan ve üniversite, araştırma kuruluşları ve sanayiden uzmanların yer aldığı çalışma gruplarının belli konularda ayrıntılı çalışmalar yapılmaktadır.

SYMPOSIUMS SEMPOZYUMLAR

ISM'S

Iron and Steel Metallurgy Symposium
Demir Çelik Metalurjisi Sempozyumu

C'S

Casting Symposium
Döküm Sempozyumu

CGRCM'S

**Ceramic, Glass, Refractory and
Composite Materials Symposium**
*Seramik, Cam, Refrakter ve
Kompozit Malzemeler Sempozyumu*

EM'S

Energy Materials Symposium
Enerji Malzemeleri Sempozyumu

NM'S

Nanomaterials Symposium
Nanomalzemeler Sempozyumu

BM'S

Biomaterials Symposium
Biyomalzemeler Sempozyumu

NFM'S

Non-Ferrous Metallurgy Symposium
Demir Dışı Metaller Metalurjisi Sempozyumu

EOSS'S

**Environment, Occupational Safety and
Sustainability Symposium**
Çevre, İş Güvenliği ve Sürdürülebilirlik Sempozyumu

MDPM'S

**Materials Degradation and
Protection Methods Symposium**
*Malzemelerin Bozunumu ve
Korunma Yöntemleri Sempozyumu*

MC'S

Materials Characterization Symposium
Malzeme Karakterizasyonu Sempozyumu

IMMC 2016

INVITED LECTURERS DAVETLİ KONUŞMACILAR

29 September Thursday / 29 Eylül Perşembe 2016

Hall Marmara / Salon Marmara

11.00 - 11.40 **Graphene Applications: Future Perspectives and Technological Developments**

Burcu Saner Okan

Sabancı University
Türkiye

29 September Thursday / 29 Eylül Perşembe 2016

Hall Marmara / Salon Marmara

15.10 - 15.50 **Fracture behavior of a Titanium Alloy for Hipreplacement Case Study**

Lulian Antoniac

University Politehnica of Bucharest
Romania

29 September Thursday / 29 Eylül Perşembe 2016

Hall Marmara / Salon Marmara

16.50 - 17.30 **Acrylic Bone Cements: New Insight and Future Perspective**

Simona Cavalu

University of Oradea
Romania

29 September Thursday / 29 Eylül Perşembe 2016

Hall Karadeniz / Salon Karadeniz

11.40 - 12.20 **The Role Metallurgy and Materials Processing in Sustainable Development**

Florian Kongoli

Logen Technologies Inc.
Canada

30 September Friday / 30 Eylül Cuma 2016

Hall Marmara / Salon Marmara

11.20 - 12.00 **Critical Raw Materials**

Martin Tauber

CRM Alliance
Belgium

30 September Friday / 30 Eylül Cuma 2016

Hall Karadeniz / Salon Karadeniz

13.30 - 14.10 **Lithium-Ion Batteries and Beyond**

Mathieu Morcrette

Reactive et Chimie des Solides
France

30 September Friday / 30 Eylül Cuma 2016

Hall Karadeniz / Salon Karadeniz

15.10 - 15.50 **Geleceğin Li-İyon PİL Negatif Elektrotları İçin Yeni Malzeme ve Elektrot Mimari Yapıları**
Geleceğin Li-İyon PİL Negatif Elektrotları İçin Yeni Malzeme ve Elektrot Mimari Yapıları

Hatem Akbulut
Sakarya University
Türkiye

01 October Saturday / 01 Ekim Cumartesi 2016

Hall Marmara / Salon Marmara

11.40 - 12.20 **Modified Ironmaking Process for Eliminating Carbon Dioxide Emission**

R. Vasant Kumar
University of Cambridge
United Kingdom

01 October Saturday / 01 Ekim Cumartesi 2016

Hall Marmara / Salon Marmara

13.30 - 14.10 **Demir Çelik Sektöründe Meslek Hastalığı Riskinin Yönetilmesi ve Sektöre Özgü Etkin Sağlık Gözetimi Kurulması**
Management of the Occupational Disease Risks in the Iron and Steel Industry and the Establishment of an Effective Sector Specific Health Surveillance

Ali Rıza Tiryaki
Artı OSGB
Türkiye

INVITED LECTURERS DAVETLİ KONUŞMACILAR



R. Vasant KUMAR

Dr. Kumar has over 20 years of research experience in metallurgy, electrochemistry, energy devices, materials chemistry synthesis and sensors. He has published over 200 papers, 12 patents, 4 Chapters in Handbooks and 1 edited book (High energy density Li batteries, Wiley-VCH 2010). He has supervised over 30 PhD students, 20 post-doctoral researchers, over 15 visiting students and hosted 8 visiting professors. Currently, Dr Kumar's research group consists of 10 PhD students, 1 MPhil (by research) student, 6 post-doctoral researchers and 2 visiting professors working on a number of research products underpinned by harnessing of electrochemical reactions in a variety of applications that range from sensors to batteries, fuel cells and photocatalytic reactions. He is the Editor of Mineral Processing & Extractive Metallurgy (London); Fellow of the Institute of Materials, Minerals & Mining (IOM3); and a Board Member of the Mineral Processing & Extractive Metallurgy Division of the IOM3. He was awarded the Institute of Materials Kroll Award in 2015 for his contributions to industrial applications of research. He has organized numerous international symposiums, workshops and conferences.

INVITED LECTURERS
DAVETLİ KONUŐMACILAR**Martin TAUBER**

Dr. Ing. Martin Tauber is the first President of the Critical Raw Material (CRM Alliance) based in Brussels. Martin is an international marketing, sales & business development executive with more than 20 years experience. Engaged in a variety of management tasks in different industries on a global level, polyolefins, non-ferrous metals and chemicals. Martin has also experience in serving as advisory board member in several companies. Since 2009 he is working as an industry consultant in the magnesium industry. He has been also representing various industries in European and international Trade & Business Associations including the International Magnesium Association (IMA). Previously, he has held various sales & marketing positions working for: Magontec, Australia; EOC Group, Belgium; Norsk Hydro Magnesium, Belgium; Borealis AB, Sweden; and PCD Polymere, Austria. He holds a PhD in social and economic science from the University of Linz, Austria.

INVITED LECTURERS
DAVETLİ KONUŐMACILAR**Mathieu MORCLETTE**

Mathieu Morcrette is the director of Laboratoire de Reactivite et Chimie des Solides in Amiens. His research is focused on electrochemical characterizations of electrode materials for lithium batteries applications. He is strongly involved in the European ALISTORE-ERI and French RS2E networks through the Benchmarking platform. He has co-author of over 100 publications and 5 patents.

INVITED LECTURERS DAVETLİ KONUŞMACILAR



Burcu SANER OKAN

Asst. Prof. Dr. Burcu Saner Okan is a researcher at Sabanci University Nanotechnology Research and Application Center and co-founder of NANOGRAFEN Nano Technological Products Company. She received BSc degree in Chemistry at Middle East Technical University, Turkey in 2005, and MS degree in 2007 and PhD degree in 2011 in Materials Science and Engineering program at Sabanci University.

Dr. Saner Okan was selected as Scifinder Future Leader in 2010 by Chemical Abstract Service and only 11 PhD students around world were invited in this program. She received the best project poster award among 330 project posters in Euronanoforum 2013 conference which was Europe's biggest nanotechnology event held on June 18-20, 2013 in Dublin, Ireland. She also won the 2nd place award with the project entitled as "Graphene production by recycling process and its use as a reinforcing and weight-reducing agent in automotive plastics" in the Project competition about new technologies in automotive sector in 2015.

Dr. Saner Okan also worked in Sabanci University's start-up company of NANOTEGO A. S. as technical project manager. She has 17 articles published in international journals, 2 patents and more than 30 conference papers. She has involved in different national and international projects about graphene and carbon based nanomaterials and smart nanocomposites.

INVITED LECTURERS DAVETLİ KONUŞMACILAR



Iulian ANTONIAC

Iulian Antoniac obtained his M.E., Ph.D. and Postdoc degrees in Materials Science at University Politehnica of Bucharest. Since 2002, he has been associated with the Medical Engineering program in the Faculty Materials Science and Engineering, University Politehnica of Bucharest, which is focused on biomaterials obtaining and characterization, medical image processing and the development of new implants for medical applications. Dr. Iulian Antoniac is the leader of the Biomaterials Group, head of the Biomaterials & Interface Phenomenon Laboratory, full professor at Faculty Materials Science and Engineering. He was appointed Vice Dean of Faculty Materials Science and Engineering and member of the Senate of University Politehnica of Bucharest in 2016. Dr. Antoniac has published widely, with over 200 papers published in peer-reviewed journals and conference proceedings, 7 patents, several books (like Handbook of Bioceramics and Biocomposites) and many invited lectures at conferences focused on biomaterials, bioceramics and materials science. In 2005, he received the Daniel Bunea Award from the Romanian Society for Biomaterials. Dr. Antoniac is currently Vice President and Council Member of the Romanian Society for Biomaterials (SRB), Former President and permanent Member of Executive Committee of the International Society for Ceramics in Medicine (ISCM).

Dr. Antoniac's research interests include: metallic biomaterials for orthopedic and dental applications, bioceramic coatings, biocomposites, retrieval analysis of explants, microscopy techniques for materials characterization, bone regeneration, physical and chemical characterization of nano- and micro- particles for biomedical application. Present areas of research work: bioceramics, biocomposites, biodegradable metallic biomaterials, surface modification, interaction tissue-biomaterials, biointerfaces, bone regeneration, retrieval and failure analysis of orthopedic and dental implants.

INVITED LECTURERS DAVETLİ KONUŞMACILAR



Ali Rıza TIRYAKI

Ali Rıza has graduated from Ondokuz Mayıs University, Faculty of Medicine in 1989. He was occupational physician for Çelebi Ground Handling Inc, Atatürk Airport area. He also coordinated the occupational health and safety activities of Çelebi Ground Handling Inc. at Ankara, İzmir, Dalaman and Antalya Airports. He gave "Educational Technologies and Material Design" lectures at Faculty of Health Sciences in Marmara University between 2002-2003 academic year.

Since 1997, Ali Rıza continues training program design and management activities with consultancy services for occupational health and safety in ARTI Sağlık Çevre Kalite Consultancy and Training Limited Company, as a founder. Ali Rıza has a key role in consultancy and training programs such as, Risk Assessment, Behaviour Based Safety, Accident Investigation and Root Cause Analysis, Corporate Crisis Management System and Crisis Management Simulation, Organization of Occupational Physician Services, Management and Assessment of Occupational Health Risk, Training of the trainer of Occupational Health and Safety Experts, etc.

He developed and performed Behavior-Based Safety Management training program in companies such; İSDEMİR, BRİSA, BEKSA, TEMSA, REKSAM, FNSS, BORÇELİK, ÇELİKORD

He executed many occupational health and safety training and consultancy program in mining, metal, iron and steel companies such as, Çayeli Bakır İşletmeleri, TUPRAG, ETİBAKIR, ASYA Maden, İSDEMİR, ERDEMİR, BORÇELİK, KERİM ÇELİK, ARÇELİK, BEKAERT, REXAM.

He manages the occupational health and safety services carried out within the companies by Artı Ortak Sağlık Güvenlik Birimi Department (OSGB) for Sabancı Holding, Kordsa Global, Kaleseramik, Pirelli, Çelikord, Bekaert, Çayeli Bakır İşletmeleri, Pfizer, Coca Cola, HSBC, Novartis, Roche, REXAM, Cummins, Kimberly Clark, RBS Bank, NCR, Shell Turcas, Rohm and Haas, DOW, Vestas, Cisco, etc.

He was the charter member of Association of Occupational Physician, founded in 2008. He attends developing of training program and preparation of guidance for occupational health supervision within the association.

INVITED LECTURERS DAVETLİ KONUŞMACILAR



Simona CAVALU

Field of interest, experience: Acrylic cements for orthopedic and dental applications, bioceramics (alumina/zirconia, alumino-silicate, hydroxyapatite), polymeric composites for controlled drug release, animal model (in vivo biocompatibility tests), in vitro tests (cells culture, cytotoxicity, proliferation), antioxidative agents.

Membership of Academic Societies: International Society for Ceramic in Medicine, Romanian Society of Biomaterials (European Society of Biomaterials), Romanian Society of Applied Biophysics (European Society of Biophysics).

Awards: "Daniel Bunea" Award of SRB for the most relevant contribution in the field of biomaterials, 2014; Excellence Award SRB 2015, Best Conference Chairperson EMN Biomaterials PHUKET 2016. Invited speaker at international conferences (10).

Research activity: More than 100 papers in SCI journals and proceedings, manager (director) of National and International Research Projects, reviewer for many International Journals. Invited professor (visiting) at Istanbul Technical University, Bezmialem Vakif University, University of Debrecen-Hungary, Meerut College India.

INVITED LECTURERS DAVETLİ KONUŞMACILAR



Kwang Seon SHIN

Present Position:

- Professor, Department of Materials Science and Engineering, Seoul National University, Korea
- Chairman, Korea Magnesium Research Association (2014~present)
- Member, The National Academy of Engineering of Korea (2009~present)
- Director, Magnesium Technology Innovation Center, SNU (2006~present)
- Board Member, Korea Science and Technology Policy, National Assembly of Korea
- International Partner Investigator, Australian Research Council, ARC Design in Light Metals (2011~present)
- Co-Chair, The 10th International Conference on Magnesium Alloys and Their Applications (Mg 2015)

Education:

- Ph.D. in Materials Science and Engineering, Northwestern University (1984), USA
- B.S. in Metallurgical Engineering, Seoul National University (1977), Korea

Career:

- President, Korean Institute of Metals and Materials (2013)
- Director, Research Institute of Advanced Materials, SNU (2009~2011)
- Assistant, Associate Professor (with Tenure) (1983-1991)
- Dept. of Chemical, Bio and Materials Engineering, Arizona State University, USA

Scientific Activity:

- Plenary and Invited Speakers at International Conferences, More than 100 Times
- Journal of Magnesium Alloys, Associate Editor (2014~present)
- Metals and Materials International (SCI, IF: 1.579), Founding Editor (1995~2012)
- Advanced Performance Materials, Int. Journal, Editorial Board Member (1993~2000)
- The Korean Institute of Metals and Materials
- President (2013), Vice President (2008~2009), Director, Editorial Board (2000~2002)
- Council Member (1994~present), Magnesium Committee: Chair (2007~2012)
- Mechanical Metallurgy Committee: Member (1991~), Chair (2006)
- Materials Processing Committee: Member (1996~), Chair (2002~03)
- Powder Materials Committee: Member (1996~present)
- Composite Materials Committee: Member (2001~present)
- Korea Foundry Society
- Board of Directors: Member (1995~2010)
- Korean Powder Metallurgy Institute
- Board of Directors: Member (1993~2010)
- Journal of Korean Powder Metallurgy Institute, Editorial Board: Member (1993~95), Editorial Director (2004~05)
- Corrosion Science Society of Korea
- Board of Directors: Member (1998~2009), Auditor (2010~2013)
- Korean Society of Automotive Engineers
- Materials Committee: Executive Secretary (1993~2001), Chair (2002~03)
- Korea Society of Life-Cycle Assessment
- Auditor (2000~01), Board of Directors: Member (1998~99)
- The Minerals, Metals and Materials Society (TMS): Member (1979~)
- Mechanical Metallurgy Committee: Member (1979~91)
- Corrosion and Environmental Effects Committee: Member (1986~91)
- Refractory Metals Committee: Member (1989~91)
- ASM International: Member (1980~91)
- Phoenix Chapter: Student Affairs Chairman (1987~89)
- Phoenix Chapter: Educational Chairman (1986~87)

INVITED LECTURERS DAVETLİ KONUŞMACILAR



Hatem AKBULUT

Hatem Akbulut was born in 1963 in Van (Turkey). He received his M.Sc. degree in cast irons from Istanbul Technical University. Subsequently, he completed his Ph.D in short fiber metal matrix composites from Istanbul Technical University in 1995. He also carried out his post-doctoral work at New Mexico Tech. USA (1996~1997)

He is currently Professor in the Department of Metallurgy and Materials Engineering, Sakarya, Turkey and he is manager of central laboratories at the same university.

His research interests are in the fields of electrochemical energy storage and nanocomposites. He has carried out 8 national and 3 international Project.

He has also participated as a Turkish coordinator in a EU, FP7 project on the Li-air batteries. He has guided 14 Ph.D. students and published 155 research papers in referred journals and 265 international conferences and symposium. He has 5 book chapter publications.

INVITED LECTURERS DAVETLİ KONUŞMACILAR



Florian KONGOLI

Dr. Florian Kongoli, [BSc (Honors), MScA (Canada), PhD (Japan)/ MTMS, MGDMB, MCIM, MSME, MAIST, MISIJ, MSigmaXi, MIFAC, MACS, MASM, MMRS, MACerS, MECS] is CEO of FLOGEN Technologies Inc. (www.flogen.com), a high-tech technology company independently incorporated in Canada and USA, specializing among others in process control, optimization and automation as well as the development of new sustainable technologies for metallurgical, chemical and environmental industries in both non-ferrous (Ni, Cu, Zn, Pb, Fe-Ni, Fe-Cr, PGMs, etc.) extraction and processing as well as in iron and steel making and processing.

He has about 25 years of industrial research and development and academic (lecturer) experience spread across many invited engagements in Asia, Australia, Europe, North America and South America. He has a rich background in both industrial projects and pure scientific ones dealing with control, optimization and automation of processes and flowsheets; physical and thermochemical modeling; physicochemical properties mattes, slags, metals, gases, oxysulfides etc. He has worked and successfully carried out many industrial projects for more than 47 well-known metallurgical and chemical companies such as Mitsubishi Materials Corporation and Sumitomo Metal Mining (Japan), Falconbridge (now Xstrata-Canada), Western Mining Corporation (now BHP Billiton-Australia), to mention just a few. In his work he has cooperated with several well-known universities around the world such as Tohoku University (Japan), Curtin University (Australia) and University of Montreal (Canada), amongst others.

Dr. Kongoli has published/edited 29 books and about 90 scientific articles in the last 5 years in peer review journals and other publications dealing with process control, optimization and automation, development of novel sustainable technologies, modeling of various properties of industrial mattes, slags, metals, effect of minor components, fluxing strategies, etc. He has delivered in 20 countries around the world about 170 plenary, keynote and invited presentations as well as articles, technical reports and research presentations.



IMMC 2016



Fairs of ANKIROS/ANNOFER/TURKCAST
ANKIROS/ANNOFER/TURKCAST Fuarları

Fairs of ANKIROS/ANNOFER/TURKCAST

ANKIROS/ANNOFER/TURKCAST Fuarları

FOCUS OF PRESTIGE IN METALLURGY INDUSTRY ANKIROS/ANNOFER/TURKCAST 2016 FAIR TRILOGY

One of the most important fairs of global metallurgy industry, ANKIROS 2016 – “13th International Iron-Steel and Foundry Technology, Machinery and Products Trade Fair”, ANNOFER 2016 – “12nd International Non-Ferrous Metals Technology, Machinery and Products Trade Fair” and TURKCAST 2016 – “7th Foundry Products Trade Fair” will be organized by Hannover Messe Ankiros Fuarcilik A.S., between September 29 - October 1, 2016, at TUYAP Fair & Congress Center, Buyukcekmece, Istanbul.

ANKIROS / ANNOFER / TURKCAST fair trilogy constitutes an unmissable fair organization for attendees with regards to strengthen their business partnerships, make new contacts, ensure sustainability of their image within the industry, promote their products and services to large mass and meet up with qualified visitors.

As the largest organization of the metallurgical industry in Eurasian region, ANKIROS/ANNOFER/TURKCAST Fairs give its visitors the opportunity to get to know the products of the most advanced technology while offering a range of solutions to a wide range of different expectations through creative alternatives appropriate for any kind of need.

ANKIROS/ANNOFER 2016 Fairs will enable all products related to metallurgy industry such as induction and melting furnaces, refractory materials, casting, sanding and molding machines and mixers, heat treatment furnaces, control and test equipment, raw materials and consumables to appear under a single roof.

Turkish Foundry Industry, which has been growing constantly and rapidly, has reached the second largest production capacity in the EU. This has been made in parallel with the growing casting demand. Members of the industry require following the developments in foundry equipment and materials that will help improving the quality and efficiency of casting outputs.



Because of increasing of demands on iron & steel products, an impressive expansion occurred on the metallurgy industry in Turkey. Turkey became a substantial market for iron and steel producers. All kinds of machinery and equipment which are needed for metallurgical plants and rolling mills take place on the fairs. Thereby ANKIROS / ANNOFER / TURKCAST 2016 Fairs are great platforms in order to show products and technologies regard to all supply chain of Eurasia for suppliers.

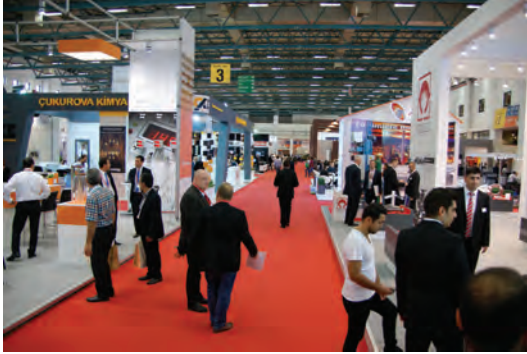
While TURKCAST 2016 brings the local and foreign casting purchasers from particularly Automotive and Sub-Industry, White Goods, Cement, Construction, Defense and Aerospace, Shipping, Railway and Transportation, Petro chemistry, Energy, any kind of Heavy Industry, Agricultural Machinery, Building Machinery industries together with Turkey's leading casting producers. Casting purchasers who will visit the fair will have a chance to share information and technology in all aspects of technical and commercial issues with foundries. The fair will focus on completely foundry products and will show kind of equipments that we use in daily life.



Besides, to point out to technological developments and the problems in the metallurgy industry, and to ensure exchange of ideas related to industry trends, “18th International Metallurgy and Materials Congress” and “8th International Foundry Congress” will be organized concurrently by TÜDÖKSAD - The Turkish Foundry Association and UCTEA Chamber of Metallurgical and Materials Engineers. Detailed information on congress by TÜDÖKSAD Academy can be found at akademi.tudoksad.org.tr and detailed information on congress by UCTEA Chamber of Metallurgical and Materials Engineers can be found at www.metalurji.org.tr.

ANKIROS/ ANNOFER/ TURKCAST 2016 Fairs are supported by local and international organizations like TÜDÖKSAD - The Turkish Foundry Association, UCTEA- Chamber of Metallurgical and Materials Engineers, TÇÜD - Turkish Steel Producers Association, CEMAFON - The European Foundry Equipment Suppliers Association, EUnited - The European Engineering Industries Association, VDMA - German Engineering Federation, CECOF - The European Committee of Industrial Furnace and Heating Equipment Associations, AMAFOND - The Italian Foundry Machinery and Products Association, FESA - Foundry Equipment Supplies Association of UK, FUNDIGEX - The Castings Exporters' Association of Spain.

By keeping its development at every turn, ANKIROS/ANNOFER/TURKCAST Fairs will improve through its local and international supporters. Considering digital data, this improvement is realized concretely. The result of ANKIROS / ANNOFER / TURKCAST 2014 indicates that 16.015 sector employee from 77 different countries have visited on site 975 exhibitors including 369 domestic and 606 foreign from 41 countries and on 21.399 m² net stand area. 17.000 visitors from over 80 countries and 1.000 exhibitors from about 50 countries on 22.500 m² net stand area are expected in 2016 thereby 95% of stand area are sold as of June.



There is an innovation this year; Exhibitors of ANKIROS / ANNOFER / TURKCAST will be able to create visitors records through QR codes on their admission passes. Thereby this will provide exhibitors to access visitors information during the fair and there will be no need for business cards for visitors any more.

All companies of the metal industry are invited to visit ANKIROS / ANNOFER / TURKCAST 2016 fairs that are being expected to reach record values with regard to participation and visit.

ANKIROS / ANNOFER / TURKCAST Fairs which will be organized in Istanbul, Turkey's metropolitan city having a unique historic fabric and spectacular beauty, offer several opportunities for visitors in terms of place and location it is held in. Out of fair-visiting hours, some places can be visited where both local and foreign visitors are allowed to spend time and recognize Turkey well.

Hannover-Messe Ankiros Fuarcilik A.S. would be glad to see all visitors related to metallurgy industry at ANKIROS / ANNOFER / TURKCAST 2016 Fairs...

IMMC 2016

18th International Metallurgy & Materials Congress

18. Uluslararası Metalurji ve Malzeme Kongresi

www.metalurji.org.tr/IMMC2016

kongre@metalurji.org.tr



www.facebook.com/IMMC2016

Kongre Kayıt Formu / Congress Registration Form

Adı, Soyadı / Name, Surname :

T.C. Kimlik No :

Telefon / Phone :

Faks / Fax :

Yazışma Adresi / Contact Address :

.....

E-mail :

.....

Çalıştığı Kuruluş / Company :

Kayıt Ücreti / Registration Fee

Kongre Delege Katılım Ücreti / Registration Fee for Delegates excluding Accommodation;

- Yüksek Lisans ve Doktora Öğrencileri / Graduate Students 236,00 TL (KDV Dahil) / 236,00 Euro (VAT Included)
- TMMOB Üyesi, Öğretim Görevlisi, Yazarlar 413,00 TL (KDV Dahil) / 413,00 Euro (VAT Included)
- UCTEA Members, Academia, Authors
- Diğer katılımcılar / Other participants 590,00 TL (KDV Dahil) / 590,00 Euro (VAT Included)
- Katılım ücreti faturası ödeyen kişiye kesilecektir. Kurumunuza fatura kesilmesini istiyorsanız lütfen kurumunuzun fatura bilgileri hakkında bilgi veriniz. / The invoice for participation fee will be deducted to the person who participate to the symposium. If you want that the invoice arrange to your company please inform us and give your company billing information.
- Kayıt ücretine kongre çantası, bildiriler özet kitabı, bildiriler CD'si, açılış kokteyli, çay-kahve ikramları ve eşantyonlar dahildir. / Registration fee includes the congress bag, abstracts book, CD-proceedings, welcome-cocktail, and refreshments.
- Kongreye katılmak için Başvuru Formunun ve katılım ücreti ödeme makbuzunun Kongre Koordinatörüne gönderilmesi gereklidir. / The participants should send the application form and the receipt of registration fee to the coordinator on time.
- Herhangi bir karışıklığa neden olmaması için katılımcıların banka dekontunu kongreye gelirken yanlarında getimelerini rica ederiz. / Submit the original bank receipt to the registration desk during the congress.

TMMOB Metalurji ve Malzeme Mühendisleri Odası
İktisadi İşletmesi - TL
Banka Hesap Numarası
Türkiye İş Bankası - Meşrutiyet Şubesi, Ankara
Şube Kodu: 4213
IBAN: TR68 0006 4000 0014 2131 0642 91

UCTEA Chamber of Metallurgical and Materials Engineers
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TMMOB METALURJİ VE MALZEME MÜHENDİSLERİ ODASI
UCTEA CHAMBER OF METALLURGICAL AND MATERIALS ENGINEERS

AÇILIŞ TÖRENİ / OPENING CEREMONY

ANKIROS 2016 / ANNOFER 2016 / TURKCAST 2016

18. ULUSLARARASI METALURJİ VE MALZEME KONGRESİ
INTERNATIONAL METALLURGY & MATERIALS CONGRESS**8. ULUSLARARASI ANKIROS DÖKÜM KONGRESİ**
INTERNATIONAL ANKIROS FOUNDRY CONGRESS

Yer / Venue : TÜYAP- Fuar ve Kongre Merkezi, İstanbul – Interexpo Salonu
TUYAP Fair and Convention Center, İstanbul – Interexpo Meeting Hall
Tarih / Date : 28 EYLÜL 2016 / 28th SEPTEMBER 2016
Zaman / Time : 18:30

AÇILIŞ KONUŞMALARİ / OPENING SPEECHES**İbrahim ANIL**

HANNOVER MESSE ANKIROS FUARCILIK A.Ş.
Murahhas Aza ve Genel Müdür / Executive Director and General Manager

Wolfgang LENARZ

GLOBAL FAIRS - DEUTSCHE MESSE AG
Başkan Yardımcısı / Senior Vice President

Dr. Timo WÜRZ

CECOF / CEMAFON
Genel Sekreter / General Secretary
EUnited Metallurgy
Direktör / Director

AÇILIŞ KONUŞMALARİ / OPENING SPEECHES**Prof. Dr. Onuralp YÜCEL**

18. ULUSLARARASI METALURJİ VE MALZEME KONGRESİ
18th INTERNATIONAL METALLURGY & MATERIALS CONGRESS
Yürütme Kurulu Başkanı / Chairman of the Organizing Committee

Tunçay ŞULAN

TMMOB METALURJİ ve MALZEME MÜHENDİSLERİ ODASI
UCTEA CHAMBER OF METALLURGICAL and MATERIALS ENGINEERS
Yönetim Kurulu Başkanı / Chairman of the Board

Veysel YAYAN

“T.Ç.Ü.D” - TÜRKİYE ÇELİK ÜRETİCİLERİ DERNEĞİ
TURKISH STEEL PRODUCERS ASSOCIATION
Genel Sekreter / General Secretary

Uğur KOCAOĞLU

“TÜDÖKSAD” - TÜRKİYE DÖKÜM SANAYİCİLERİ DERNEĞİ
TURKISH FOUNDRYMEN'S ASSOCIATION
Yönetim Kurulu Başkanı / Chairman of the Board

CECOF: European Committee of Industrial Furnace and Heating Equipment Associations

CEMAFON: European Committee of the Manufacturers of Materials and Products for Foundries

EUnited Metallurgy: The European Metallurgical Equipment Association

IMMC 2016 PROGRAMME

IMMC 2016 PROGRAMI

IMMC 2016 PROGRAMME

IMMC 2016 PROGRAMI

	29 September Thursday / 29 Eylül Perşembe 2016			30 September Friday / 30 Eylül Cuma 2016			01 October Saturday / 01 Ekim Cumartesi 2016		
	Hall / Salon Büyükkada	Hall / Salon Marmara	Hall / Salon Karadeniz	Hall / Salon Büyükkada	Hall / Salon Marmara	Hall / Salon Karadeniz	Hall / Salon Büyükkada	Hall / Salon Marmara	Hall / Salon Karadeniz
10:00	10:00 CGRCM'S1 Ceramic, Glass, Refractory and Composite Materials Symposium1 Seramik, Cam, Refrakter ve Kompozit Malzemeler Sempozyumu1 11:00		10:00 EOSS'S1 Environment, Occupational Safety and Sustainability Symposium1 Çevre, İş Güvenliği ve Sürdürülebilirlik Sempozyumu1 11:20	10:00 MC'S1 Materials Characterization Symposium1 Malzeme Karakterizasyonu Sempozyumu1 11:00	10:00 NFM'S1 Non-Ferrous Metallurgy Symposium1 Demir Dışı Metaller Metalurjisi Sempozyumu1 11:00	10:00 NFM'S6 Non-Ferrous Metallurgy Symposium6 Demir Dışı Metaller Metalurjisi Sempozyumu6 11:00	10:00 CGRCM'S6 Ceramic, Glass, Refractory and Composite Materials Symposium5 Seramik, Cam, Refrakter ve Kompozit Malzemeler Sempozyumu5 11:00	10:00 ISM'S1 Iron and Steel Metallurgy Symposium1 Demir Çelik Metalurjisi Sempozyumu1 11:00	10:00 C'S1 Casting Symposium1 Döküm Sempozyumu1 11:00
11:00			Coffee Break / Kahve Molası	Coffee Break / Kahve Molası	Coffee Break / Kahve Molası	Coffee Break / Kahve Molası	Coffee Break / Kahve Molası	Coffee Break / Kahve Molası	Coffee Break / Kahve Molası
11:20	11:20 CGRCM'S2 Ceramic, Glass, Refractory and Composite Materials Symposium2 Seramik, Cam, Refrakter ve Kompozit Malzemeler Sempozyumu2 12:40	11:20 NM'S1 Nanomaterials Symposium1 Nanomalzemeler Sempozyumu1 12:40	11:40 EOSS'S2 Environment, Occupational Safety and Sustainability Symposium2 Çevre, İş Güvenliği ve Sürdürülebilirlik Sempozyumu2 13:00	11:20 MC'S2 Materials Characterization Symposium2 Malzeme Karakterizasyonu Sempozyumu2 12:40	11:20 NFM'S2 Non-Ferrous Metallurgy Symposium2 Demir Dışı Metaller Metalurjisi Sempozyumu2 12:40	11:20 MC'S6 Materials Characterization Symposium6 Malzeme Karakterizasyonu Sempozyumu6 12:40	11:20 CGRCM'S7 Ceramic, Glass, Refractory and Composite Materials Symposium6 Seramik, Cam, Refrakter ve Kompozit Malzemeler Sempozyumu6 12:40	11:20 ISM'S2 Iron and Steel Metallurgy Symposium2 Demir Çelik Metalurjisi Sempozyumu2 12:40	11:20 C'S2 Casting Symposium2 Döküm Sempozyumu2 12:40
12:00									
13:00	Lunch / Öğle Yemeği			Lunch / Öğle Yemeği			Lunch / Öğle Yemeği		
13:30	13:30 CGRCM'S3 Ceramic, Glass, Refractory and Composite Materials Symposium3 Seramik, Cam, Refrakter ve Kompozit Malzemeler Sempozyumu3 14:50	13:30 NM'S2 Nanomaterials Symposium2 Nanomalzemeler Sempozyumu2 14:50	14:00 EOSS'S PANEL Environment, Occupational Safety and Sustainability Symposium Çevre, İş Güvenliği ve Sürdürülebilirlik Sempozyumu 15:30	13:30 MC'S3 Materials Characterization Symposium3 Malzeme Karakterizasyonu Sempozyumu3 14:50	13:30 NFM'S3 Non-Ferrous Metallurgy Symposium3 Demir Dışı Metaller Metalurjisi Sempozyumu3 14:50	13:30 EM'S1 Energy Materials Symposium1 Enerji Malzemeleri Sempozyumu1 14:50	13:30 MDPM'S1 Materials Degradation and Protection Methods Symposium1 Malzemelerin Bozunumu ve Korunma Yöntemleri Sempozyumu1 14:50	13:30 ISM'S3 Iron and Steel Metallurgy Symposium3 Demir Çelik Metalurjisi Sempozyumu3 14:50	13:30 C'S3 Casting Symposium3 Döküm Sempozyumu3 14:50
14:00									
15:00	15:10 CGRCM'S4 Ceramic, Glass, Refractory and Composite Materials Symposium4 Seramik, Cam, Refrakter ve Kompozit Malzemeler Sempozyumu4 16:30	15:10 BM'S1 Biomaterials Symposium1 Biyomalzemeler Sempozyumu1 16:30	Coffee Break / Kahve Molası	15:10 MC'S4 Materials Characterization Symposium4 Malzeme Karakterizasyonu Sempozyumu4 16:30	15:10 NFM'S4 Non-Ferrous Metallurgy Symposium4 Demir Dışı Metaller Metalurjisi Sempozyumu4 16:30	15:10 EM'S2 Energy Materials Symposium2 Enerji Malzemeleri Sempozyumu2 16:30	15:10 MDPM'S2 Materials Degradation and Protection Methods Symposium2 Malzemelerin Bozunumu ve Korunma Yöntemleri Sempozyumu2 16:30	15:10 ISM'S4 Iron and Steel Metallurgy Symposium4 Demir Çelik Metalurjisi Sempozyumu4 16:30	15:10 ISM'S5 Iron and Steel Metallurgy Symposium5 Demir Çelik Metalurjisi Sempozyumu5 16:30
16:00									
16:50	16:50 CGRCM'S5 Ceramic, Glass, Refractory and Composite Materials Symposium5 Seramik, Cam, Refrakter ve Kompozit Malzemeler Sempozyumu5 18:10	16:50 BM'S2 Biomaterials Symposium2 Biyomalzemeler Sempozyumu2 18:10	EDUCATION / PANEL EĞİTİM / PANEL	16:50 MC'S5 Materials Characterization Symposium5 Malzeme Karakterizasyonu Sempozyumu5 18:10	16:50 NFM'S5 Non-Ferrous Metallurgy Symposium5 Demir Dışı Metaller Metalurjisi Sempozyumu5 18:10	16:50 EM'S3 Energy Materials Symposium3 Enerji Malzemeleri Sempozyumu3 18:10			
17:00									
18:00									
19:00									

EDUCATION - PANEL
EĞİTİM - PANEL**29 September Thursday / 29 Eylül Perşembe 2016****Hall Karedeniz / Salon Karadeniz**Session Chairman / Oturum Başkanı: **ONURALP YÜCEL**

Time / Saat: 16.00 – 17.30

Teknoloji Odaklı Ekosistemde Küresel Mühendislik Eğitimi*Global Engineering Education in the Technology-Focused Ecosystems***Hasan Mandal**Yüksek Öğretim Kurumu
Türkiye**ODTÜ Metalurji ve Malzeme Mühendisliği Bölümünün Kuruluşunun 50. Yılında Bölümün Tarihçesi ve Eğitimdeki Gelişmeler***50th Anniversary of the METU Metallurgical and Materials Engineering Department: History of the Department and Improvements in the Undergraduate Program***C.Hakan Gür**Middle East Technical University
Türkiye**Mühendislik Eğitiminin Evrimi ve Ders Planı Tasarımı***Evolution of Engineering Education and the Design of Courses Planning***Yılmaz Taptık**İstanbul Technical University
Türkiye**CONGRESS SESSIONS**
KONGRE OTURUMLARI**CGRCM'S****Ceramic, Glass, Refractory and Composite Materials Symposium****Seramik, Cam, Refrakter ve Kompozit Malzemeler Sempozyumu**

CGRCM'S 2016

Session 1

Session Chairman / Oturum Başkanı: **FİLİZ ŞAHİN**

10.00 - 10.20

A Study on Spinel Formation and Sintering Behavior of Al₂O₃-MgO System for Induction Furnace Linings**Ozan Uylas^{1,2}, Muharrem Timuçin³, Ender Suvacı¹, Muammer Bilgiç⁵, Beyhan Özdemir⁴, Oktay Uysal², Uğur Cengiz⁵, Özkan Kurukavak⁴, Hasan Erdoğan⁴, Yakup Yalçınkaya⁴**¹Anadolu University, ²Entekno Endüstriyel Ltd. Şti.,³Middle East Technical University, ⁴Kütahya Manyezit Sanayi A.Ş.,⁵Bilecik Demir Çelik A.Ş.

Türkiye

10.20 - 10.40

Investigation of the Influences of SnO₂ Incorporation on the Mechanical and Thermal Shock Behaviours of MgO-Spinel Composite Refractories**Cemal Aksel, Pınar Uğur**

Anadolu University

Türkiye

10.40 - 11.00

Seramik Sağlık Gereçlerinde Tane Boyut Dağılımının Yüzey Özelliklerine Etkisi*Influence of Particle Size Distribution on Surface Properties of Sanitarywares***Selin Baklacı¹, Pervin Gençoğlu¹, Alpagut Kara²**Seramik Araştırma Merkezi, ²Anadolu University

Türkiye

CGRCM'S 2016

Session 2

Session Chairman / Oturum Başkanı: **ALPAGUT KARA**

11.20 - 11.40

Usage of Boron Wastes in the Commercially Produced and Used ZrCMS System Opaque Frit Composition**Fatma Aksu¹, Ayşe Tunalı¹, Neslihan Tamsü Sellı¹, Buğra Çiçek², Emre Talışık¹**¹Eczacıbaşı Building Product Co., ²Yıldız Technical University
Türkiye

11.40 - 12.00

Silver Containing Antimicrobial Soda Lime Glass Prepared by Ion Exchange**Duygu Güldiren, İpek Erdem, Süheyla Aydın**

İstanbul Technical University

Türkiye

12.00 - 12.20

Influence of TiO₂ Content on the Photocatalytic Activity of TiO₂-B₂O₃ Glasses Prepared by the Sol-Gel Process**Sıtkı Can Akkuş¹, Abdullah Öztürk¹, Volkan Kalem², Jongee Park³**¹Middle East Technical University, ²Selçuk University,³Atılım University

Türkiye

12.20 - 12.40

Production of Nanoporous Glass Fiber by Selective Leaching Method**E. Burak Ertuğ^{1,3}, Çekdar Vakıfahmetoğlu², Abdullah Öztürk¹**¹Middle East Technical University, ²İstanbul Kemerburgaz University,³KTO Karatay University

Türkiye

CGRCM'S
Session 3Session Chairman / Oturum Başkanı: **ABDULLAH ÖZTÜRK**

13.30 - 13.50 **High-Purity Si₃N₄ For Technical Ceramics & High Heat-Resistant SiC Fiber For Ceramic Matrix Composites Applications**

UBE Industries, Ltd., UBE Europe GmbH
Japan, Germany
(Commercial Paper)

13.50 - 14.10 **Optimization of Pyrolysis and Liquid Silicon Infiltration Parameters for the Processing of C/C-SiC Composites**

Simge Tülbez¹, Ziya Esen², Arcan F. Dericioğlu¹
¹Middle East Technical University, ²Çankaya University
Türkiye

14.10 - 14.30 **Translucent α -SiAlON Ceramics Produced by Gass Pressure Sintering (GPS) Method**

Suna Avcıoğlu¹, Semra Kurama²
¹Ondokuz Mayıs University, ²Anadolu University
Türkiye

14.30 - 14.50 **Production of Porous Sodium Borate-Bonded Si₃N₄ Ceramics via Starch Consolidation Technique**

Ayşe Kalemtaş, Okan Bilgiç
Bursa Technical University
Türkiye

CGRCM'S
Session 4Session Chairman / Oturum Başkanı: **AYŞE KALEMTAŞ**

15.10 - 15.30 **Fabrication and Characterization of Composites Starting from Boron Carbide Titanium Powder Mixture**

Meral Cengiz, Bülent Büyük, A. Beril Tuğrul, Gültekin Göller, Onuralp Yücel, Filiz Şahin
İstanbul Technical University
Türkiye

15.30 - 15.50 **Mechanical and Microstructural Properties of Spark Plasma Sintered B₄C-W₂B₅ Composites**

Salih Çağrı Özer¹, Servet Turan¹, Filiz Çınar Şahin²
¹Anadolu University, ²İstanbul Technical University
Türkiye

15.50 - 16.10 **Effect of Spark Plasma Sintering Parameters on the Synthesis and Mechanical Properties of Ti₃SiC₂ Ceramics**

Erhan Ayas, Ayşe Nil Ertürk
Anadolu University
Türkiye

16.10 - 16.30 **Processing of the MAX Phase of Ti₃SiC₂ Ceramic from Oxides**

Ahmet Atasoy, Emre Saka
Sakarya University
Türkiye

CGRCM'S
Session 5

Session Chairman / Oturum Başkanı: FİGEN KAYA

16.50 - 17.10 **Preparation of Pre-Alloyed TZM Alloy with Addition of B₄C by Using Spark Plasma Sintering****Barış Yavaş, Filiz Şahin, Onuralp Yücel, Gültekin Göller**İstanbul Technical University
Türkiye17.10 - 17.30 **Mechanical Properties of Mg/TiNi Composites Produced Via Spark Plasma Sintering Technique****Tarık Aydoğmuş**Yüzüncü Yıl University
Türkiye17.30 - 17.50 **Synthesis of Zn₂SnO₄ Powders via Hydrothermal Synthesis for Ceramic Targets****Cem Açıksarı^{1,2}, I. Gözde Tunçolu³, Ender Suvacı⁴, Emel Özel⁴, Stanislav Rembeza⁵, Ekaterina Rembeza⁵, Ekaterina Plotnikova⁵, Natelia N. Kosheleva⁵, Tamara Svistova⁵**¹Yıldız Technical University, ²Mutlu Akü ve Malzeme A.Ş.,³Fematek Uluslararası Ticaret A.Ş., ⁴Anadolu University,⁵Voronezh State Technical University
Türkiye, Russia17.50 - 18.10 **Fabrication of Alumina-Epoxy Interpenetrating Network Composites****Okan Bilgiç, Yasin Altın, Ayşe Bedeloğlu, Onur Saray, Ayşe Kalemtaş**Bursa Technical University
TürkiyeCGRCM'S
Session 6

Session Chairman / Oturum Başkanı: TOLGA TAVŞANOĞLU

10.00 - 10.20 **Processing and Characterization of CYSZ/Al₂O₃ Functionally Graded Thermal Barrier Coating****Fatih Kırbıyık, Gültekin Göller**İstanbul Technical University
Türkiye10.20 - 10.40 **The Tape Casting and Sintering Properties of Alumina-Zirconia-Graphene Multilayer Composites****Ali Özer, M. Sonuç İşlek**Cumhuriyet University
Türkiye10.40 - 11.00 **Carbon Black Nano-Sized Particle Reinforced Composite Coatings: Mechanical Behavior-Structure Relation****Orkut Sancakoğlu, Erdal Çelik, Tefik Aksoy**Dokuz Eylül University
Türkiye

CGRCM'S
Session 7

Session Chairman / Oturum Başkanı: BORA DERİN

11.20 - 11.40

**Microstructure and Mechanical Properties of Graphene/
TiC-ZrC Composites****Burak Çağrı Ocak, Filiz Şahin, Onuralp Yücel, Gültekin Göller**
İstanbul Technical University
Türkiye

11.40 - 12.00

**Effect of Excess Carbon Content of Boron Carbide and
Temperature on Synthesis of Calcium Hexaboride Powders****Duygu Yılmaz Çakta¹, Nurşen Koç¹, Servet Turan²**
¹Eskişehir Osmangazi University, ²Anadolu University
Türkiye

12.00 - 12.20

**Combustion Synthesis of Molybdenum Containing Boride
Based Hard Alloys****Sevinc Rahimi Moghaddam¹, Bora Derin¹, Onuralp Yücel¹,
M. Şeref Sönmez¹, Meltem Sezen², Feray Bakan²,
Vladimir Sanin³, Dimitriy Andreev³**
¹İstanbul Technical University, ²Sabancı University,
³Institute of Structural Macro Kinetics Materials Science
Türkiye, Russia

NM'S

Nanomaterials Symposium

Nanomalzemeler Sempozyumu

NM'S

Session 1

Session Chairman / Oturum Başkanı: H. EMRAH ÜNALAN

11.00 - 11.40

Graphane Applications: Future Perspectives and Technological Developments**Burcu Saner Okan**Sabancı University
Türkiye
(Invited Lecturer)

11.40 - 12.00

Characterization of Silver Nanowire Modified Textile Heaters**Doğa Doğanay, Şahin Coskun, Sevim Polat,
H. Emrah Ünal**Middle East Technical University
Türkiye

12.00 - 12.20

Synthesis of Submicron Metal/Metal Oxide Particles Production by Medium Frequency-Induction System**Levent Kartal^{1,2}, Barış Daryal¹, Yasin Kılıç¹,
Güldem Kartal Şireli¹, Servet Timur¹**¹Istanbul Technical University, ²Hitit University
Türkiye

NM'S

Session 2

Session Chairman / Oturum Başkanı: BURCU SANER OKAN

13.30 - 13.50

Behavior of Polylactide / Montmorillonite Nanocomposites**Burcu Sarı, Cevdet Kaynak**Middle East Technical University
Türkiye

13.50 - 14.10

Effect of Nano-Clay Addition on Thermal Conductivity of Rigid Polyurethane**Oktay Uysal^{1,3}, Kübra Ortaç^{1,4}, Gökşin Sayer², Metin Kaya²,
Ali Ünlütürk², Ender Suvacı¹, Murat Erdem¹**¹Anadolu University, ²Arçelik A.Ş., ³Entekno, ⁴Poliser
Türkiye

14.10 - 14.30

Synthesis Manganese-Doped Zinc Oxide Nanoparticles**Özlem Altıntaş Yıldırım¹, Caner Durucan²**¹Selçuk University, ²Middle East Technical University
Türkiye

14.30 - 14.50

Preparation and Characterization of TiO₂ Processed by Alkoxide Gel Method**Ahmet Çağrı Kılınçi Ali Aydın Göktaş**Dokuz Eylül University
Türkiye

IMMC
2016

29 September Thursday / 29 Eylül 2016
Hall Marmara / Salon Marmara

IMMC
2016

BM'S

Biomaterials Symposium

Biyomalzemeler Sempozyumu

BM'S
Session 1

Session Chairman / Oturum Başkanı: İPEK AKIN

- | | |
|---------------|--|
| 15.10 - 15.50 | Fracture behavior of a Titanium Alloy for Hip replacement Case Study
Lulian Antoniac
University Politehnica of Bucharest
Romania
(Invited Lecturer) |
| 15.50 - 16.10 | Effect of Laser Beam Welded AISI 2205 Duplex Stainless Steel on the Viability of Fibroblast Cells
Ceyhun Köse¹, Ramazan Kaçar², Aslı Pınar Zorba³, Melahat Bağirova³, Emrah Şefik Abamor³, Adil Allahverdiyev³
¹ Gaziosmanpaşa University, ² Karabük University, ³ Yıldız Technical University
Türkiye |
| 16.10 - 16.30 | Nanocomposite Materials Containing Metal Nanoparticles for Tissue Engineering Applications
Ayşen Aktürk, Melek Erol Taygun, Gültekin Göller, Sadriye Küçükbayrak
İstanbul Technical University
Türkiye |

BM'S
Session 2Session Chairman / Oturum Başkanı: **CANER DURUCAN**16.50 - 17.30 **Acrylic Bone Cements: New Insight and Future Perspective****Simona Cavalu**University of Oradea
Romania
(Invited Lecturer)17.30 - 17.50 **Production and Characterization of Yttria Stabilized Zirconia Ceramic Blocks for Dental Applications****Melis Kaplan¹, Abdullah Öztürk¹, Jongee Park²**¹Middle East Technical University, ²Atılım University
Türkiye17.50 - 18.10 **Effect of Time on the Direct Formation of Hydroxyapatite Coatings on Commercially Pure Zirconium by Plasma Electrolytic Oxidation****Salim Levent Aktuğ¹, Metin Usta¹²**Gebze Technical University, TÜBİTAK Marmara Research Center
Türkiye

EOSS'S

Environment, Occupational Safety and
Sustainability SymposiumÇevre, İş Güvenliği ve
Sürdürülebilirlik Sempozyumu

EOSS'S
Session 1Session Chairman / Oturum Başkanı: **SERVET TİMUR**

- 10.00 - 10.20 **Health and Safety Issues Associated with Nanotechnology**
Ayşenur Gül
Işık University
Türkiye
- 10.20 - 10.40 **Recovery of Metals From Solutions Obtained by Synthetic Diamond Cutting Tool Recycling**
Meltem Ergun, M. Şeref Sönmez
İstanbul Technical University
Türkiye
- 10.40 - 11.00 **Production of Polyethylene – Aluminum Composites from Waste Tetra Pak Packages**
Büşra Akoğlu¹, Kübra Azgı¹, Armağan Özpektürk¹, Sevil İncir², Murat Çopur², Ahmet Turan¹
¹Yalova University, ²Alarko Carrier San. ve Tic. A.Ş.
Türkiye
- 11.00 - 11.20 **Selective Sulphide Precipitation of Copper, Nickel and Zinc from Industrial Wastewater**
Aysel Şen, Levent Kartal, Gülden Kartal Şireli, Servet Timur
İstanbul Technical University
Türkiye

EOSS'S
Session 2Session Chairman / Oturum Başkanı: **M. ŞEREF SÖNMEZ**

- 11.40 - 12.20 **Energy Saving and Modern Process Control and Automation**
Florian Kongoli
Flogen Technologies Inc.
Canada
(Invited Lecturer)
- 12.20 - 12.40 **A New Approach on the Recycling of EAF Slags: Sponge Iron Production Via Direct Reduction**
İdil Bilen¹, Ahmet Turan², Paer Jönsson¹, Onuralp Yücel³
¹KTH Royal Institute of Technology, ²Yalova University,
³İstanbul Technical University
Türkiye
- 12.40 - 13.00 **Konverter Altındaki Sıvı Çelik Potaları İçin Otomatik Külçe Alüminyum Besleme Sistemi Tasarımı**
Automatic Ingot Aluminium Feeding System Design for Liquid Steel Ladle Under Converter
Mesut Tural¹, Ahmet Kayrak², Yılmaz Erbil³, Serdar Güzel³
¹Erdemir Mühendislik Yönetim ve Danışmanlık Hizmetleri A.Ş., ²İsdemir A.Ş., ³Secant Teknoloji Geliştirme A.Ş.
Türkiye

EOSS'S
PANEL

Session Chairman / Oturum Başkanı: ALİ RIZA TIRYAKI

14.00 - 15.30

İnsan, Kültür, İletişim ve Yönetim Boyutlarıyla Üretim İşletmelerinde Sürdürülebilir, Sağlıklı ve Güvenli Çalışma**Sustainable, Healthy and Safe Work in Production Operations: Opinions from Humanistic, Cultural and Communication Aspects****PANELISTS / PANELİSTLER****Management and its Impact on Health and Safety****Çiğdem Vatansver**
Namık Kemal University
Türkiye**Dynamics of Safe and Unsafe Behavior****Nevin Kılıç**
Fatih Sultan Mehmet Vakıf University
Türkiye**Culture of Healthy and Safe Work****Elif Sungur**
Maltepe University
Türkiye**The Role of Communication in Health and Safety at Work****Hakan Aytekin**
Maltepe University
Türkiye**MC'S****Materials Characterization Symposium****Malzeme Karakterizasyonu Sempozyumu**

MC'S

Session 1

Session Chairman / Oturum Başkanı: FERHAT KARA

10.00 - 10.20 **The Evaluation and Requirement of the Team Work and Problem-Based Design Projects in Metallurgical and Materials Engineering Education**

Ayşe Kılıç, İsmail Yılmaz Taptk

Istanbul Technical University
Türkiye

10.20 - 10.40 **Evaluation of the Microstructure of AISI D2 Steel by Magnetic Barkhausen Noise Technique**

Ebru Arslan¹, Ömer Faruk Murathan², Kemal Davut¹, Volkan Kılıçlı²

¹Atılım University, ²Gazi University
Türkiye

10.40 - 11.00 **Sensitivity Analysis of Distortion of Carburized Steel Shafts Using Computer Simulations**

Büşra Yazır Terzi, G. Elif Evcil, Seçil Yıldız, Kemal Davut, Caner Şimşir

Atılım University
Türkiye

MC'S

Session 2

Session Chairman / Oturum Başkanı: MEHMET ALİ GÜLGÜN

11.20 - 11.40 **Investigation the Reliability of Gleeble Phase Transition Data by the Means of EBSD Method**

Dilara Çimen, Gözde Karaçalı, Ekrem Akça, Recep Vatansver

Ereğli Iron and Steel Works Company
Türkiye

11.40 - 12.00 **Influence of Atmospheric Plasma Surface Activation Treatments on Polypropylene (PP) Surface Properties**

Sevim Gökçe Esen¹, Ekrem Altuncu¹, Fatih Üstel¹, Gülşah Karagöz²

¹Sakarya University, ²Assan Hanil Automotive Industry and Trade Inc.
Türkiye

12.00 - 12.20 **Microstructural Refinement of Ti-6Al-4V Alloy Fabricated by Additive Manufacturing Using Thermochemical Processes**

Güney Mert Bilgin¹, Ziya Esen², Şeniz Reyhan Kuşhan Akın², Arcan F. Dericioğlu¹

¹Middle East Technical University, ²Çankaya University
Türkiye

12.20 - 12.40 **Effect of Ta Addition on Structural and Room Temperature Mechanical Properties of B2-Type Ordered Feal Intermetallics**

Mehmet Yıldırım¹, M. Vedat Akdeniz², Amdulla O. Mekhrabov²

¹Selçuk University, ²Middle East Technical University
Türkiye

MC'S

Session 3

Session Chairman / Oturum Başkanı: **GÜLTEKİN GÖLLER**

- 13.30 - 13.50 **Mechanical Properties of Plasma Electrolytic Carburized Pure Iron**
Fatih Çavuşlu^{1,2}, Metin Usta^{1,3}
¹Gebze Technical University, ²Adana Science and Technology University,
³TÜBİTAK Marmara Research Center
Türkiye
- 13.50 - 14.10 **Determination of Crystallite Size, Lattice Strain and Amorphization of Mechanically Alloyed W-VC-C Powder Composites**
Sultan Sönmez, Hadi Jahangiri, M. Lütfi Öveçoğlu
İstanbul Technical University
Türkiye
- 14.10 - 14.30 **Surface Characterization Study on EPDM Rubber Seal Profiles**
Ekrem Altuncu¹, Uğursoy Olgun¹, Ali Erkin Kutlu², Yusuf Güner², Müfit Çağlayan²
¹Sakarya University, ²Standard Profil Automotiv
Türkiye
- 14.30 - 14.50 **Microstructural and Fractographic Investigation of Brazed Martensitic Stainless Steel Joints Under Cyclic Loading**
Tanya A. Başer
TOFAŞ Türk Otomobil Fabrikası A.Ş.
Türkiye

MC'S

Session 4

Session Chairman / Oturum Başkanı: **SERVET TURAN**

- 15.10 - 15.30 **Sm Microalloyed Cu-Zr-Al Bulk Metallic Glasses**
Fatih Sıkan¹, İlkay Kalay², Yunus Eren Kalay¹
¹Middle East Technical University, ²Çankaya University
Türkiye
- 15.30 - 15.50 **Fully Automated Analysis of Non-Metallic Inclusions in Steel According to EN 10247 and Focus Effect**
Hüseyin Kurtuldu¹, Göksel Durkaya², Hakan Kaplan², Tuncay Çelebi³, Figen Dikilitaş³, Osman Yazaroğlu³
¹Başkent University, ²Atılım University,
³Kardemir Iron Steel Industry Trade
Türkiye
- 15.50 - 16.10 **Investigation of Thermal Behaviour of Hisarcık and Espey Colemanites**
Dilek Şenol Arslan¹, Orhan Özdemir¹, M.Sabri Çelik²
¹İstanbul University, ²İstanbul Technical University
Türkiye
- 16.10 - 16.30 **Synthesis of Copper Doped Zinc Oxide (ZnO:Cu) Nano-Centipedes via Vapor Deposition Method**
Özlem Altıntaş Yıldırım^{1,2}, Yuzei Liu², Amanda K. Pettford Long^{2,3}
¹Selçuk University, ²Argonne National Laboratory,
³Northwestern University
Türkiye, USA

MC'S

Session 5

Session Chairman / Oturum Başkanı: Y. EREN KALAY

- 16.50 - 17.10 **Measurement of Residual Stresses in the Carburized Steels by Non-Destructive Techniques**
Hüseyin Hızlı, Tuğçe Kaleli, C. Hakan Gür
Middle East Technical University
Türkiye
- 17.10 - 17.30 **Comparison of the Mechanical Response of Porous Ti-6Al-4V Alloys Produced by Different Compaction Techniques**
G. İpek Selimoğlu², E. Erkan Aşık¹, Fatma Şen², Gizem Yaymacı²
¹University of Twente, ²Anadolu University
Netherlands, Türkiye
- 17.30 - 17.50 **Microstructural Characterization of Spark Plasma Sintered Graphene Containing SiAlON**
Sinem Başkut, Alper Çınar, Servet Turan
Anadolu University
Türkiye
- 17.50 - 18.10 **New Generation Ultra-High Strength Steels For Cold Forming**
Barış Çetin¹, Eren Billur^{2,3}, Cansu Yazganarık¹
¹FNNS Savunma Sistemleri A.Ş.,
²Billur Metal Form Mühendislik ve Danışmanlık Ltd. Şti.,
³Atılım University
Türkiye

MC'S

Session 6

Session Chairman / Oturum Başkanı: KÜRŞAT KAZMANLI

- 11.20 - 11.40 **Characterisation of Tribological Properties of Lubricating Oil With Silicon Nitride Nanoparticle Additives**
Abdullah Sert¹, Umut Savacı², Osman Nuri Çelik¹, Servet Turan²
¹Eskişehir Osmangazi University, ²Anadolu University
Türkiye
- 11.40 - 12.00 **A Study of Quantitative Metallography and X-ray Diffraction Methods for Quantifying Carbide Amount in AISI D2 Tool Steel**
Abdullah Sert¹, Selim Gürgen², Osman Nuri Çelik¹
¹Eskişehir Osmangazi University, ²Anadolu University
Türkiye
- 12.00 - 12.20 **Combined Effect of Heat Treatment and Friction Stir Processing on the Microstructure and Mechanical Properties of Low Carbon Steels Used in Shipbuilding**
Dursun Murat Sekban¹, Semih Mahmut Aktarer², Gençğa Pürçek¹
¹Karadeniz Technical University, ²Recep Tayyip Erdoğan University
Türkiye
- 12.20 - 12.40 **Mapping the Spatial Distribution of Nodular Properties in Spheroidal Graphite Cast Iron**
Göksel Durkaya¹, Hüseyin Kurtuldu², Hakan Kaplan¹, Barış Çetin³
¹Atılım University, ²Başkent University, ³FNSS Savunma Sistemleri A.Ş.
Türkiye

**IMMC
2016**

30 September Friday / 30 Eylül 2016

Hall Marmara / Salon Marmara

**IMMC
2016**

NFM'S

Non-Ferrous Metallurgy Symposium

Demir Dışı Metaller Metalurjisi Sempozyumu

**NFM'S
Session 1**

Session Chairman / Oturum Başkanı: **MARTIN TAUBER**

- | | |
|---------------|--|
| 10.00 - 10.20 | A Chronoamperometric Study for Nucleation and Growth Mechanism of Au-Ag Alloy Electrodeposition from Pyrophosphate Electrolyte
Kübra Akben, Servet Timur
İstanbul Technical University
Türkiye |
| 10.20 - 10.40 | Antimony Production From Domestic Stibnite Ores Via Niederschlag Process
Sedef Pınar Başağ¹, Ahmet Turan², Onuralp Yücel¹
¹ İstanbul Technical University, ² Yalova University
Türkiye |
| 10.40 - 11.00 | Production of Pure Platinum and Palladium from Dore Metals via Hydrometallurgical Methods
Yasemin Kılıç, Güldem Kartal Şireli, Servet Timur
İstanbul Technical University
Türkiye |

NFM'S
Session 2Session Chairman / Oturum Başkanı: **GÖKHAN ORHAN**

11.20 - 12.00

Critical Raw Materials**Martin Tauber**CRM Alliance
Belgium
(Invited Lecturer)

12.00 - 12.20

Production of Technical-Grade MoO₃ from MoS₂ Concentrate**Kağan Benzeşik, M. Şeref Sönmez, Onuralp Yücel**İstanbul Technical University
Türkiye

12.20 - 12.40

Investigation of the Larger Scale Tungsten Production by the Electrochemical Reduction Technique**Furkan Özdemir¹, Metehan Erdoğan², Mustafa Elmadağlı³, İshak Karakaya¹**¹Middle East Technical University, ²Yıldırım Beyazıt University, ³Roketsan Inc.
TürkiyeNFM'S
Session 3Session Chairman / Oturum Başkanı: **ALİ ARSLAN KAYA**

13.30 - 14.10

Development of High Performance Magnesium Alloys via Twin Roll Strip Casting Process**Kwang Seon Shin**Seoul National University
Republic of Korea
(Invited Lecturer)

14.10 - 14.30

Production of Magnesium Metal From Calcined Dolomite Via Pidgeon Process**Mehmet Buğdaycı^{1,2}, Ahmet Turan², Murat Alkan³, Onuralp Yücel¹**¹İstanbul Technical University, ²Yalova University, ³Dokuz Eylül University
Türkiye

14.30 - 14.50

Designing Aircraft Passenger Seat Components Using Magnesium Alloys**Erman Arkın, Ç. Yalçın, A. Ataman, Y. Türe, D. Turan, A. Araslan Kaya**Assan Haniil, Anadolu University, Şeyh Edabali University, Muğla Sıtkı Koçman University
Türkiye

NFM'S
Session 4

Session Chairman / Oturum Başkanı: KWANG SEON SHIN

15.10 - 15.30 **Deformation Behavior of Some Ternary Magnesium Alloy Systems****G. Palumbo^{1,2}, D. Sorgento^{2,3}, A. Coccozza¹, D. Eren⁴, D. Turan⁴, A.Arslan Kaya⁵**¹Polytechnico di Bari, ²CNR-IFN UOS Bari, ³Universita degli Studi della Basilicata, ⁴Anadolu University, ⁵Muğla Sıtkı Koçman University Türkiye, Italy15.30 - 15.50 **Changes in Elasticity Modulus and Damping in Some Novel Magnesium Alloy Systems at Room and High Temperatures****Çisem Çelik¹, S. Güneş¹, N. Sarıkaya¹, P. Karadayı¹, Y. Türe², A. Ataman³, E. Arkin⁴, Ç. Yalçın⁴, G. Palumbo^{5,6}, D. Sorgento^{6,7}, D. Turan³, A. Arslan Kaya¹**¹Muğla Sıtkı Koçman University, ²Şeyh Edabali University, ³Anadolu University, ⁴Assan Hanil Co., ⁵Polytechnico di Bari, ⁶CNR-IFN UOS Bari, ⁷Universita degli Studi della Basilicata Türkiye, Italy15.50 - 16.10 **Effect of SiC Grain Refining on Wear Resistance of Mg-Al Alloys****Erdem Karakulak¹, Norbert Hort², Yusuf Burak Küçüker³**¹Kocaeli Üniversitesi, ²Helmholtz-Zentrum Geesthacht, ³Kocaeli Üniversitesi Türkiye, Germany16.10 - 16.30 **Aluminum Sheet Production: General Principles of Finishing Lines****Sadık Kaan İpek, Faruk Günaçan, Ali Ulus**

Teknik Alüminyum A.Ş. Türkiye

NFM'S
Session 5

Session Chairman / Oturum Başkanı: VEDAT SANCAKDAR

16.50 - 17.10 **Optimization of Strontium Addition for the Modification of AISi7Mg0.3 Alloy****Selin Derin¹, Uğur Aybarç², Yücel Birol¹**¹Dokuz Eylül University, ²CMS Co. A.Ş. Türkiye17.10 - 17.30 **Numerical Simulation of Residual Stresses in Al 5083 Slab Based on Finite Volume Method****Şerzat Safaltın, Sebahattin Gürmen**

İstanbul Technical University Türkiye

17.30 - 17.50 **Enhancement of Mechanical Properties for AA6082 Alloy by Using Equal Channel Angular Pressing and Aging Processes****A.Yiğit Erdoğan, Hasan Kaya, Ş.Hakan Atapek**

Kocaeli University Türkiye

17.50 - 18.10 **Optimization of the Diffusion Bonding Parameters for 6063 Aluminum Alloy****Sıla Ece Atabay, Arcan F. Dericioğlu**

Middle East Technical University Türkiye

NFM'S
Session 6

Session Chairman / Oturum Başkanı: İLHAN GÖKNEL

10.00 - 10.20

Microstructure and Properties of Age Hardenable Cu-2.55Ni-0.55Si Alloy**Ş. Hakan Atapek¹, Gülşah Aktaş¹, Şeyda Polat¹, Apostolos N. Chamos², Spiros G. Pantelakis²**¹Kocaeli University, ²University of Patras
Türkiye, Greece

10.20 - 10.40

The Effects of Mo Addition on Microstructural Characteristics of W-Ni-Co Heavy Alloys**Onur Dinçer, M.Kaan Pehlivanoglu**TÜBİTAK-SAGE
Türkiye

10.40 - 11.00

Liquid Phase Sintering Behavior of Tungsten Powders Produced by the Electrochemical Reduction**Mahmut Erol¹, Metehan Erdoğan¹, İshak Karakaya²**¹Yıldırım Beyazıt University, ²Middle East Technical University
Türkiye

EM'S

Energy Materials Symposium

Enerji Malzemeleri Sempozyumu

EM'S

Session 1

Session Chairman / Oturum Başkanı: **HATEM AKBULUT**

13.30 - 14.10

Lithium-Ion Batteries and Beyond**Mathieu Morcrette**Reactive et Chimie des Solides
France
(Invited Lecturer)

14.10 - 14.30

The Use of Polysulfide Barriers to Improve the Performance of Room-Temperature Sodium-Sulfur (Na-S) Batteries**Elif Ceylan Cengiz, Rezan Demir-Çakan**Gebze Technical University
Türkiye

14.30 - 14.50

Improvement of Cycling Behavior of Aqueous Electrolyte LiFePO₄ Cathode Material**Serkan Sevinç, Burak Tekin, Rezan Demir-Çakan**Gebze Technical University
Türkiye

EM'S

Session 2

Session Chairman / Oturum Başkanı: **DAVUT UZUN**

15.10 - 15.50

Geleceğin Li-iyon PİL Negatif Elektrotları İçin Yeni Malzeme ve Elektrot Mimari Yapıları*New Materials for the Future Li-ion Battery Negative Electrodes and the Electrodes Architectural Structures***Hatem Akbulut**Sakarya University
Türkiye
(Invited Lecturer)

15.50 - 16.10

Advanced Batteries for Micro-Hybrid Applications**Hatice Doğanay, Muhsin Mazman, Cem Açıkarsarı, Doğançan Sarıkaya, Öner Toy, Ezgi Bilgiç, Serdar Gül, Mustafa Kılıçaslan, Ali Alim**Mutlu Akü ve Malzeme A.Ş.
Türkiye

16.10 - 16.30

LiMn_{2-x}M_xO₄ (M = Li, Co) Cathode Production Via Sol-Gel Method and Characterization for Li-Ion Batteries**B.Anıl Özkaya, Özgül Keleş**İstanbul Technical University
Türkiye

EM'S
Session 3Session Chairman / Oturum Başkanı: **TAYFUR ÖZTÜRK**

- 16.50 - 17.10 **The Effect of Ball Milling Time on Discharge Behaviour of Mg₂Ni-Type Hydrogen Storage Alloy Electrodes**
Gökçe Hapçı Ağaoğlu, Gökhan Orhan
İstanbul University
Türkiye
- 17.10 - 17.30 **The Surface and Bulk Kinetics of Oxygen Transport in Solid Oxide Fuel Cell Cathodes**
Doğancan Sarı, Ziya Çağrı Torunoğlu, Fatih Pişkin, Yener Kuru, Yunus Emre Kalay, Tayfur Öztürk
Middle East Technical University
Türkiye
- 17.30 - 17.50 **Development of Rare Earth-Free Negative Electrode Materials for Ni/MH Batteries**
Ezgi Onur Şahin, Cavit Eyöğge, Tayfur Öztürk
Middle East Technical University
Türkiye
- 17.50 - 18.10 **Design and Development of Ni-Based Heusler Alloys for Magnetic Refrigeration**
Sedanur Toraman, Amdulla O. Mekhrabov, M. Vedat Akdeniz
Middle East Technical University
Türkiye

MDPM'S

**Materials Degradation and
Protection Methods Symposium****Malzemelerin Bozunumu ve
Korunma Yöntemleri Sempozyumu**

MDPM'S
Session 1Session Chairman / Oturum Başkanı: **NURHAN CANSEVER**13.30 - 13.50 **Degradation of Thermal Barrier Coatings with Molten CaO-MgO-Al₂O₃-SiO₂ (CMAS) Deposition and Hot Corrosion****Muhammet Karabaş¹, Emre Bal², Ayşe Kılıç³, İ. Yılmaz Taptık³**¹Hakkari University, ²Akdeniz University, ³Istanbul Technical University
Türkiye13.50 - 14.10 **Determination of Hot Corrosion and CMAS Infiltration Behavior of Thermal Barrier Coatings using a CO₂ Laser Beam****Gültekin Göller¹, Mustafa Güven Gök²**¹Istanbul Technical University, ²Hakkari University
Türkiye14.10 - 14.30 **Comparison of Microbiologically Induced Corrosion Behavior of 316L Stainless Steel and Galvanized Steel as Cooling Tower Materials****Tuba Ünsal¹, Simge Arkan¹, Esra İlhan-Sungur¹,
Nurhan Cansever²**¹Istanbul University, ²Yıldız Technical University
Türkiye14.30 - 14.50 **Corrosion Behavior and Cathodic Protection Modeling of Selected Steel Component in Seawater****Rauf Aksu¹, Metehan Erdoğan², Halim Meço³, İshak Karakaya¹**¹Middle East Technical University, ²Yıldırım Beyazıt University,
³FNSS Defence Systems
TürkiyeMDPM'S
Session 2Session Chairman / Oturum Başkanı: **MUSTAFA ÜRGEN**15.10 - 15.30 **Corrosion Properties of Ni-P-W / Al₂O₃ Electroless Composite Coatings on AZ91 Magnesium Alloy****Selim Taşçı, Reşat Can Özden, Mustafa Anık**Eskişehir Osmangazi University
Türkiye15.30 - 15.50 **Corrosion Behaviors of Different Aluminum Alloys and Cathodic Protection Application to the Amphibious Military Vehicles****Refik Onur Uğuz¹, Halim Meço², Metehan Erdoğan³,
İshak Karakaya¹**¹Middle East Technical University, ²FNSS Defense Systems Inc.,
³Yıldırım Beyazıt University
Türkiye15.50 - 16.10 **Characterization of Corrosion of A380****Eda Ergün Songül, Derya Dışınar, Gökhan Orhan**Istanbul University
Türkiye16.10 - 16.30 **Galvanik Korozyonu Önlemek İçin Bağlantı Elemanı Montajında Farklı Metodların Kullanımı***Effect of Different Fastener Installation Methods to Prevent Galvanic Corrosion***Ali Erdem Eken, Cemil Yılmaz, Evren Tan**Aselsan A.Ş.
Türkiye

IMMC
2016

01 October Saturday / 01 Ekim 2016

Hall Marmara / Salon Marmara

IMMC
2016

ISM'S

Iron and Steel Metallurgy Symposium

Demir Çelik Metalurjisi Sempozyumu

ISM'S

Session 1

Session Chairman / Oturum Başkanı: NURİ SOLAK

10.00 - 10.20

Çemtaş Çelik Fabrikasında Hidrojen Kontrolü

Hydrogen Control at Çemtaş Steel Plant

**Hazal Suna¹, İsmail İrfan Ayhan¹, Mehmet Akpınar¹,
Naci Sevinç²**

¹Çemtaş Çelik Makine Sanayi, ²Atılım University
Türkiye

10.20 - 10.40

**Çok Düşük Karbonlu Çeliklerde Pota Nozulu Tıkanma
Probleminin Önlenmesine Yönelik İncelemeler ve
Uygulamalar**

*Investigation of Ladle Nozzle Clogging Problem in ULC Steel
Grades at Continuous Casting Process*

**Zafer Çetin, Emre Alan, Cenk Öztürk, Yılmaz Kaçar,
Oğuz Gündüz**

Ereğli Demir ve Çelik Fabrikaları T.A.Ş.
Türkiye

10.40 - 11.00

**Inclusion Shape Control with Calcium and Zirconium and
Their Effects on Mechanical Properties Cast Steel**

Ersel Aydın, C. Fahir Arısoy, M. Kelami Şeşen

Istanbul Technical University
Türkiye

11.00 - 11.20

**Effect of CAL&CGL Heat Cycle Characteristics on
Microstructure and Mechanical Properties of DP Steels**

**Mehmet Bulut Özyiğit, Ümran Başkaya, Yasemin Kılıç,
Oğuz Gündüz**

Ereğli Iron and Steel Works Company
Türkiye

ISM'S
Session 2Session Chairman / Oturum Başkanı: **OĞUZ GÜNDÜZ**11.40 - 12.20 **Modified Ironmaking Process for Eliminating Carbon Dioxide Emission****R. Vasant Kumar**University of Cambridge
United Kingdom
(Invited Lecturer)12.20 - 12.40 **Dünyada ve Türkiye'de Demir Çelik Üretimi**
*Steel Production in the World and in Turkey***Yusuf Ziya Kayır**KOSGEB Ankara Sincan Müdürlüğü
Türkiye12.40 - 13.00 **3.Yüksek Fırın Hazne Tamiratu**
*Blast Furnace #3 Hearth Repair***Gökhan Baki, Ahmet Serter Karabıyık, Fatih Şatır,
Memduh Kırca**İskenderun Demir Çelik Fabrikaları A.Ş.
TürkiyeISM'S
Session 3Session Chairman / Oturum Başkanı: **TAMER BIÇAKLI**13.30 - 14.10 **Demir Çelik Sektöründe Meslek Hastalığı Riskinin Yönetilmesi ve Sektöre Özgü Etkin Sağlık Gözetimi Kurulması***Management of the Occupational Disease Risks in the Iron and Steel Industry and the Establishment of an Effective Sector Specific Health Surveillance***Ali Rıza Tiryaki**Artı OSGB
Türkiye
(Invited Lecturer)14.10 - 14.30 **Production of Ferromanganese, Zinc and Potassium Hydroxide From Spent Alkaline Batteries****Selçuk Yeşiltepe, M. Kelami Şeşen**İstanbul Technical University
Türkiye14.30 - 14.50 **Effect of B_2O_3 and CaO/Al_2O_3 Ratio on Physical Properties of $CaO-Al_2O_3$ Based Mould Fluxes****Mustafa Seyrek¹, Richard Thackray¹, Priyanka Nadig²**¹The University of Sheffield, ²Allied Metallurgical Products Pvt. Ltd.
United Kingdom, India

ISM'S
Session 4Session Chairman / Oturum Başkanı: **C. FAHİR ARISOY**

- 15.10 - 15.30 **Determining the Interactions Between Raw Sinter Blend and Sinter Product**
Selda Daldal¹, İsa Keskin¹, Ebru Tezcan¹, Cenk Kaya¹, S. Çevik²
¹Ereğli Iron and Steel Works Company,
²İskenderun Iron ad Steel Works Company
Türkiye
- 15.30 - 15.50 **Increasing the Sinter Ratio at Isdemir's Blast Furnace#4**
Sadi Balaban, Evren Şahin
İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye
- 15.50 - 16.10 **Synthesis of Spongy Iron Powder from Maghemite in Pure Methane Atmosphere**
Şenol Çetinkaya, Şerafettin Eroğlu
İstanbul University
Türkiye
- 16.10 - 16.30 **A Study of Slab Quality and Tonnage Determination for Overlapping Heats in a Continuous Casting Tundish**
Ayşe Oran^{1,2}, Müberra Gürel³, Bora Derin¹
¹İstanbul Technical University, ²Çolakoğlu Metalurji A.Ş., ³Safir Company
Türkiye

ISM'S
Session 5Session Chairman / Oturum Başkanı: **KELAMİ ŞEŞEN**

- 15.10 - 15.30 **C66D Kalite Malzemelerde Mukavemet Değerlerinin Düşürülmesi ve Müşterideki Çekilebilirlik Hızının Artırılması**
Increase Tensile Strength and Decrease Drawability on Customer of C66D Quality
Serdar Günbay, Koray Aray, Erdi Gönülalan
İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye
- 15.30 - 15.50 **Effect of Microstructure on Fracture Toughness of Coarse-Grain Heat Affected Zone in As-Welded X70M Steel**
Mehmet Çağırıcı, Uygur Tosun, Murat Tolga Ertürk, C. Hakan Gür
Middle East Technical University
Türkiye
- 15.50 - 16.10 **Determination of Factors Influencing Distortion of Carburized Quenching of Steel Shafts Using DoE with Computer Simulations**
Hasan Yılmaz, Büşra Yazır, G. Elif Evcil, Sevil Yıldız, Caner Şimşir, Kemal Davut
Atılım University
Türkiye
- 16.10 - 16.30 **ILTEC - A Revolutionary New and Safe Cooling Solution by Mettop**
Martina B. Hanel, Andreas Filzwieser, Iris Filzwieser, Stefan Ruhs
Metttop GmbH
Austria

C'S

Casting Symposium

Döküm Sempozyumu

C'S

Session 1

Session Chairman / Oturum Başkanı: **NECİP ÜNLÜ**

- | | |
|---------------|--|
| 10.00 - 10.20 | Sodyum-Silikat Bağlayıcı Kum Sistemlerindeki Gelişmeler
<i>Developments in Na-Silicate Bonded Sand Systems</i>
Ahmet Odabaş¹, Necip Ünlü²
¹ Alazan Döküm Kimyasalları A.Ş., ² İstanbul Technical University
Türkiye |
| 10.20 - 10.40 | Tribological Behavior of Cast CF3 and CF3M Austenitic Stainless Steels
Gülşah Aktaş, Şeyda Polat, Ş. Hakan Atapek
Kocaeli University
Türkiye |
| 10.40 - 11.00 | Casting Simulation Study on Thermal Spray TBC Coated Die in Aluminum Wheel Low Pressure Die Casting
Yılmaz Okçu¹, Ekrem Altuncu², Fatih Üstel², Ö. Burak Çe¹, Ali Kara¹
¹ CMS Jant ve Makine Sanayi A.Ş., ² Sakarya University
Türkiye |
| 11.00 - 11.20 | Process Simulation to Support Casting of Co-Cr-Mo Superalloy Dental Blocks Using Vacuum Centrifugal Investment Casting Method
T. Gürel Poyraz, F. Duygu Garip
Nev Vakumlu Hassas Döküm
Türkiye |

C'S

Session 2

Session Chairman / Oturum Başkanı: **BÜLENT ŞİRİN**

- 11.40 - 12.00 **Endüstri 4.0 Döküm Sektörü İçin Bir Fırsat mı, Yoksa Tehdit mi?**
Industry 4.0, Is It an Opportunity or a Threat to the Foundry Industry?
Yaylalı Günay
Günay Danışmanlık
Türkiye
- 12.00 - 12.20 **Cost Reduction Study of Heavy Vehicle Carrier Casting on Vertical Moulding Line**
Recep Akyüz, İsmail Büyükgül, Abdullah Karakulak, Mehmet Arslan
Demisaş Döküm Emaye Mamülleri A.Ş.
Türkiye
- 12.20 - 12.40 **End Product Quality and Melt Treatment in Direct Chill Casting**
Arda Yorulmaz, Eray Erzi, Derya Dışpınar
İstanbul University
Türkiye

C'S

Session 3

Session Chairman / Oturum Başkanı: **YAYLALI GÜNAY**

- 13.30 - 13.50 **The Effects of High Pressure Die Casting in Thin Sections of Heat Treated 7075 Aluminum Alloy**
Tayfun Durmaz, Ali Kalkanlı
Middle East Technical University
Türkiye
- 13.50 - 14.10 **Evolution of Aluminum Melt Quality of A356 After Several Recycling**
Abdullah Şaşmaz, Özen Gürsoy, Eda Ergün Songül, Eray Erzi, Derya Dışpınar
İstanbul University
Türkiye
- 14.10 - 14.30 **Hot Tearing Tendency of A356, A413 and A380.1 Alloy**
Muhammet Uludağ¹, Remzi Çetin², Derya Dışpınar³
¹Selçuk University, ²Haliç University, ³İstanbul University
Türkiye
- 14.30 - 14.50 **Thermomechanical Treatment of CuNiSi Alloy**
Ömer Faruk Koç, Ali Kalkanlı
Middle East Technical University
Türkiye

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CONGRESS POSTERS
KONGRE POSTERLERİ

**Ceramic, Glass, Refractory and Composite Materials Symposium /
Seramik, Cam, Refrakter ve Kompozit Malzemeler Sempozyumu**

- CGRCM'S-P01** **The Effect of Third Component Filler on Properties of a Glass Reinforced Epoxy Matrix Composites**
Neslihan Topalömer¹, Aylin Altınbay Bekem¹, Duygu Gülfem Baydar², Mustafa Doğu², Ahmet Ünal¹
¹Yıldız Technical University, ²Mir R&D Company
Türkiye
- CGRCM'S-P02** **An Investigation on the Processing of SiC by Magnesiothermic Process**
Ahmet Atasoy, Emre Saka
Sakarya University
Türkiye
- CGRCM'S-P03** **The Effect of Sintering Temperature on Machinability Properties of Vermiculite Based Glass-Ceramics**
Umut Önen¹, Ediz Ercenk², Şenol Yılmaz²
¹Cumhuriyet University, ²Sakarya University
Türkiye
- CGRCM'S-P04** **Manufacturing and Aging of 7075 Based Metal-Metal Composites by Using Sawdusts as Reinforcements**
Rıdvan Gecü, Alptekin Kısasöz, Kerem Altuğ Güler, Ahmet Karaaslan
Yıldız Technical University
Türkiye
- CGRCM'S-P05** **The Investigation for the Possibilities of Construction Material Production from Vermiculite**
Umut Önen¹, Ediz Ercenk², Şenol Yılmaz²
¹Cumhuriyet University, ²Sakarya University
Türkiye
- CGRCM'S-P06** **Preparation and Characterization of Electroless Ni-Coated SiC Composite Particles**
Ulaş Matik
Karabük University
Türkiye

CGRCM'S-P07

Influence of Starting Material Molar Ratio on the Properties of Alumina Powders**Azade Yelten, Suat Yılmaz**Istanbul University
Türkiye

CGRCM'S-P08

The Effects of Additives on Ballistic Performance of the Spark Plasma Sintered Boron Carbide Ceramics**Burcu Apak, Gültekin Göller, Onuralp Yücel, Filiz Şahin**Istanbul Technical University
Türkiye

CGRCM'S-P09

Production and Characterization of Althea Officinalis L. Fiber Reinforced Polyester Composites**Ahmet Çağrı Kılıç¹, Serhan Köktaş¹, Metehan Atagür², Mehmet Özgür Seydibeyoğlu²**¹Dokuz Eylül University, ²İzmir Katip Çelebi University
Türkiye

CGRCM'S-P10

A Preliminary Study on the Use Waste Silica in Floor Tile Production**Fuat Çelik, İskender Işık**Dumlupınar University
Türkiye

CGRCM'S-P11

Production and Characterization of Magnesium Aluminate Spinel (MgAl₂O₄) Ceramics with Light Transmission by Spark Plasma Sintering**Seyran Sarıdaş, Gültekin Göller, Onuralp Yücel, Filiz Şahin**Istanbul Technical University
Türkiye

CGRCM'S-P12

Production of an Iron Boride Reinforced Nanocomposite by Devitrification of a Fe-Co-Ni Based Metallic Glass**Aytekin Hitit, Z. Özgür Yazıcı, Hakan Şahin, Pelin Öztürk, Nusrettin Barut, Buğrahan Eryeşil**Afyon Kocatepe University
Türkiye

CGRCM'S-P13

The Effects of Particle Size on the Microstructural Properties of YSZ 50% Wt – Lz 50% Wt Composite Thermal Barrier Coating**Utku Orçun Gezici, Muhammet Karabaş, Ayşe Kılıç, İsmail Yılmaz Taptık**Istanbul Technical University
Türkiye

CGRCM'S-P14

Characterization of Cellular Ceramics Made by Clay Additive Porcelain Tile Polishing Residues**Derya Kırsever, H.Özkan Toplan**Sakarya University
Türkiye

CGRCM'S-P15

Microstructural Investigation of the Influence of TiO₂ Addition on Corrosion Behaviour of MgO-Spinel Composite Refractories**Cemal Aksel**Anadolu University
Türkiye

CGRCM'S-P16

Solid Particle Erosive Wear Behavior of Basalt Base Glass-Ceramics Influence of Erodent Particle Size and Air Jet Pressure**Muhammet Öztürk, Uğur Günay, Ediz Ercenk, Şenol Yılmaz**Sakarya University
Türkiye

CGRCM'S-P17

Processing of Ceramic Pigment for High Temperature Applications**Ahmet Atasoy¹, Ertuğrul Can², Orhan Şahin²**¹Sakarya University, ²Gizem Frit Glazür San. Tic. A.Ş.
Türkiye

CGRCM'S-P18

Synthesis of BaHF Ceramics by Microwave Heating**Emel Erdal, Simge Tülbez, Arcan F. Dericioğlu**Middle East Technical University
Türkiye

CGRCM'S-P19

Production and Characterization of TZM Based TiC or ZrC Reinforced Composites Prepared by Spark Plasma Sintering (SPS)**Cansinem Tüzemen, Filiz Şahin, Onuralp Yücel, Gültekin Göller**İstanbul Technical University
Türkiye

CGRCM'S-P20

Conventional Sintering of Diamond Tools Used in Cutting Natural Stones**Ekin Selvi¹, Ferit Topaloğlu², Onur Tazegül², Eyüp Sabri Kayalı²**¹Yalova University, ²İstanbul Technical University
Türkiye

CGRCM'S-P21

Synthesis of Fe-doped MicNo[®]-ZnO Particles**Bülent Alkan¹, Ender Suvacı²**¹Anadolu University, ²Hitit University
Türkiye

CGRCM'S-P22

Commercial and Coprecipitated of Al₂O₃-20 wt.% ZrO₂ Plasma Sprayed Coatings**Mediha İpek, Cuma Bindal, Sakin Zeytin**Sakarya University
Türkiye

CGRCM'S-P23

Manufacturing Corrosion Resistant CAS-Based Glass Ceramics from the Natural Raw and Waste Materials**Zafer Yavuz Merkit, Nil Toplan**Sakarya University
Türkiye

CGRCM'S-P24

Production of Magnesia-Rich Magnesium Aluminate Spinel**Nuray Canikoğlu, H. Özkan Toplan**Sakarya University
Türkiye

CGRCM'S-P25

Glass Coloring In Studio Environment**Göktuğ Günkaya, Khorram Manafidizaji**Anadolu University
Türkiye

CGRCM'S-P26

Use of a Sustainable ZnO in Place of Standard ZnO in Ceramic Tile Production**Mustafa Fahri Özer¹, Zehra Emel Oytaç¹, Eda Atan¹, Alpagut Kara¹²**¹Ceramic Research Center INC, ²Anadolu University
Türkiye

CGRCM'S-P27

Production of CaO-Al₂O₃-SiO₂ Based Plasma Spray Coating Powder**Bahadır Aydın, Göknil Gülpınar, Hüseyin Özkan Toplan, Nil Toplan**Sakarya University
Türkiye

CGRCM'S-P28

Thermal Cycle Properties of Plasma-Sprayed Strontium Zirconate Coatings**Göksun Sönmez, S. Kurt, H. Özkan Toplan, Nil Toplan**Sakarya University
Türkiye

CGRCM'S-P29

Gamma Attenuation Properties of Strontium Zirconate Coated Steel**A. Beril Tuğrul¹, H. Özkan Toplan², Bülent Büyük¹, Ertuğrul Demir¹, Göksun Sönmez², Nil Toplan²**¹İstanbul Technical University, ²Sakarya University
Türkiye

CGRCM'S-P30

Production of Cobalt - Doped (Ba,Ca)TiO₃ Piezoelectric Ceramics from Turkish Barite**A. Murat Avcı¹, G. Özhan Demirel¹, Oktay Uysal¹, Şükrü Can², Ender Suvacı², Emel Özel²**¹Entekno Ltd., ²Anadolu University
Türkiye

CGRCM'S-P31

Production of Olivine Based Refractories from Domestic Sources**Özgün Küçüköğlü, Onuralp Yücel**İstanbul Technical University
Türkiye

CGRCM'S-P32

Effect of Al Particle Size on Formation of $TiB_2-Al_2O_3$ Powder by Combustion Synthesis**Hasan Erdem Çamurlu**Akdeniz University
Türkiye

CGRCM'S-P33

Post Mortem Study on Al_2O_3 -MgO Induction Furnace Linings**Ozan Uylas^{1,2}, Muharrem Timuçin³, Ender Suvacı¹, Muammer Bilgiç⁵, Beyhan Özdemir⁴, Oktay Uysal², Uğur Cengiz⁵, Özkan Kurukavak⁴, Hasan Erdoğan⁴, Yakup Yalçinkaya⁴**¹Anadolu University, ²Entekno Endüstriyel Ltd. Şti.,³Middle East Technical University, ⁴Kütahya Manyezit Sanayi A.Ş.,⁵Bilecik Demir Çelik A.Ş.

Türkiye

CGRCM'S-P34

Fabrication of Porous SiC Based Ceramics in Air Atmosphere**Ayşe Kalemtaş, Nigar Özey**Bursa Technical University
Türkiye

CGRCM'S-P35

Effect of ZrO_2 Addition on the Mechanical Properties and Microstructural Stability of Spark-Plasma Sintered $Al_2O_3/Er_3Al_5O_{12}$ Eutectic**Kübra Gürcan, Yaprak Özman, Ece Özerdem, Erhan Ayas**Anadolu University
Türkiye

CGRCM'S-P36

Ultrasound Assisted Synthesis of Sm, Gd and Nd Doped Ceria Electrolyte and Comparison of Their Ionic Conductivities**Hikmet Okkay¹, Mahmut Bayramoğlu², M. Faruk Öksüzömer³**¹Yalova University, ²Gebze Technical University, ³Istanbul University

Türkiye

CGRCM'S-P37

Production and Mechanical Characterization of Commercial Synthetic Hydroxyapatite-Niobium (V) Oxide-Magnesium Oxide Composite**Nermin Demirkol**Kocaeli University
Türkiye

CGRCM'S-P38

Development of a Cement-Free Castable Refractory Composition Having High Slag Corrosion Resistance**Serdar Özgen, Lütfi Öveçoğlu, Bilal Demir, Dilan Er, Furkan Özkaya, İlkiz Tüzel, Serin Tatlıdil**İstanbul Technical University
Türkiye

CGRCM'S-P39

Processing of Sidi Bouali Sand for Glass Industry**Malek Ould Hamou, Karima Deramchi, Amira Merchichi, Leila Oubrahim**Ecole Nationale Polytechnique
Algeria

CGRCM'S-P40

Characterization and Processing of SIG's Diatomite, Mascara, Algeria**Malek Ould Hamou, Djamel Benkaci, Amira Merchichi, Karima Deramchi**Ecole Nationale Polytechnique
Algeria

CGRCM'S-P41

Thermal Shock Resistance of Mullite Obtained From Kaolin and Tri Hydrated Alumina**Zahra Malou¹, Mohamed Hamidouche¹, Belhouchet Hocine²**¹University of Setif, ²University of M'sila
Algeria

CGRCM'S-P42

Numerical Analysis of the Damage of Composites Materials**Sara Ramdoun, Boualem Serier, Fekirini Hamida, Bouafia Farida**University of Sidi Bel Abbes
Algeria**Nanomaterials Symposium / Nanomalzemeler Sempozyumu**

NM'S-P01

Silver Nanowire- Nickel Hydroxide Nanocomposites for Pseudocapacitors**Recep Yüksel, Şahin Coşkun, Hüsnü Emrah Ünalın**Middle East Technical University
Türkiye

- NM'S-P02** **Production of High Refractory Y_2O_3 Submicron Particles By The Ultrasonic Spray Pyrolysis (USP) And Sol-Gel Methods**
Doğan Arslan, Onur Tüysüz, Tolga Eker, Esra Yudar, Elif Emil, Şerzat Safaltın, Sebahattin Gürmen
Istanbul Technical University, Türk-Alman University
Türkiye
- NM'S-P03** **Optimization of RT Superplasticity of UFG Zn-22Al Alloy by Applying ECAP at Different Temperatures and Phase Regions**
Muhammet Demirtaş¹², Harun Yanar², Genççağa Pürçek²
¹Bayburt University, ²Karadeniz Technical University
Türkiye
- NM'S-P04** **Synthesis of Nanoparticles by Using RF-Plasma System**
Bariş Daryal, Levent Kartal¹², Yasin Kılıç¹, Güldem Kartal Şireli¹, Servet Timur¹
¹Istanbul Technical University, ²Hitit University
Türkiye
- NM'S-P05** **Investigation of Nano Silver Particles Synthesis by Medium Frequency-Induction Method**
Levent Kartal¹², Bariş Daryal¹, Yasin Kılıç¹, Güldem Kartal Şireli¹, Servet Timur¹
¹Istanbul Technical University, ²Hitit University
Türkiye
- NM'S-P06** **Features of Synthesis of Iron Oxide Nanoparticles with High Sorption and Magnetic Properties**
Valentin A. Chebanov¹, Dmitriy S. Sofronov¹, A.M. Odnovolova¹, Sergiy N. Lavrynenko²
¹National Academy of Sciences of Ukraine, ²National Technical University "Kharkov Polytechnic Institute"
Ukraine
- NM'S-P07** **Synthesis of Al- Doped Zinc Oxide (ZnO) Particles with Designed MicNo[®] Morphology**
Pınar Şengün, Ender Suvacı
Anadolu University
Türkiye

- NM'S-P08** **Synthesis of Carbon Nanotube Cathodes Via Molten Salt Technique for Li-Air Batteries**
Mustafa Anık, Ersu Lökçü
Eskisehir Osmangazi University
Türkiye
- NM'S-P09** **Effect of Stearic Acid Amount on the High Energy Milling Behaviour of Atomized Iron Powders**
Esra Kasapgil¹, Ilke Anaç¹, Burak Özkal²
¹Gebze Technical University, ²Istanbul Technical University
Türkiye
- NM'S-P10** **Production of Nano Zinc Oxide (ZnO) by Hydrothermal Method**
Duygu Yesiltepe, Sebahattin Gurmen
Osmaniye Korkut Ata University, Istanbul Technical University
Türkiye
- NM'S-P11** **Production and Characterization of Undoped and Doped Y_2O_3 Thin Films**
Fatma Ünal, Sebahattin Gürmen, Kürşat Kazmanlı, Mustafa Ürgen
Istanbul Technical University
Türkiye
- NM'S-P12** **Investigation of Film Formation Behavior of PS Latex/AGNPs Composites Using Fluorescence Technique**
Saziye Uğur, Uğur Çelik
Istanbul Technical University
Türkiye
- NM'S-P13** **Capacitances Built in Nanostructures**
Levan Chkhartishvili^{1,2}, Archil Gachechiladze², Otar Tsagareishvili², Domenti Gabunia²
¹Georgian Technical University,
²Ferdinand Tavadze Institute of Metallurgy&Materials Science
Georgia

NM'S-P14

Production and Structural Characterization of NiB Nanoalloy Synthesized by Ball Milling**L.Seda Mut, Amdullah O. Mekhrabov, M.Vedat Akdeniz, M. Merve Karataş**Middle East Technical University
Türkiye**Biomaterials Symposium / Biyomalzemeler Sempozyumu**

BM'S-P01

Effect of Cutting Methods and Annealing on the 316L Stainless Steel Stent Structure**Levent Öncel, M. Ercan Açma**İstanbul Technical University
Türkiye

BM'S-P02

Influence of Thermal Treatments on Development of Ti6Al4V Alloys (Grade 23) Surface Activity Via Ceramic Coatings Produced by MAO Process**Serhan Köktaş, Ahmet Çakır**Dokuz Eylül University
Türkiye

BM'S-P03

Thermal Plasma Coating of Medical Implants**H. Gözde Yıldırım, Caner Durucan, Tayfur Öztürk**Middle East Technical University
Türkiye

BM'S-P04

The Relation of Rheological Properties with Electrospinnability of Gelatin/Sodium Alginate Solutions**Seza Özge Gönen, Ayşe Özyuğuran, Ezgi Keskin, Hande Yıkın, Melek Erol Taygun, Sadriye Küçükbayrak**İstanbul Technical University
Türkiye

BM'S-P05

The Effect of Final Voltage on the Surface Morphology-Chemistry of PEO Treated Zirconium**Sezgin Cengiz¹, Yunus Azaklı¹, Mehmet Tarakçı¹, Lia Stanciu², Yücel Geçer¹**¹Gebze Technical University, ²Purdue University
Türkiye, USA

BM'S-P06

NiTi-Cu Shape Memory Alloys Produced by Combustion Synthesis**Berk Keskin¹, Bora Derin¹, Meltem Sezen², Feray Bakan², Paola Bassani³**¹İstanbul Technical University, ²Sabancı University, ³National Research Council-Institute for Energetics and Interphases
Türkiye, Italy**Environment, Occupational Safety and Sustainability Symposium
Çevre, İş Güvenliği ve Sürdürülebilirlik Sempozyumu**

EOSS'S-P01

Recovery of Copper, Nickel and Zinc from Wastewater via Solvent Extraction**Alica Esenboğa, Yasin Kılıç, Levent Kartal, Servet Timur**İstanbul Technical University
Türkiye

EOSS'S-P02

Synthesis and Production of Bulk Amorphous Steel from Cast Iron Scrap**Hafize Çakmak, M. Vedat Akdeniz, Amdulla O. Mekhrabov**Middle East Technical University
Türkiye

EOSS'S-P03

Recovery of Copper Powder from Wastewater by Rotating Cylinder Electrode (RCE) Method**Merve Sert, Gökçe Hapçı Ağaoğlu, Gökhan Orhan**İstanbul University
Türkiye**Materials Characterization Symposium
Malzeme Karakterizasyonu Sempozyumu**

MC'S-P01

Synthesis and Characterization of Bulk Amorphous/Nanocrystalline Soft Magnetic Materials**M. Merve Karataş, M. Vedat Akdeniz, Amdulla O. Mekhrabov**Middle East Technical University
Türkiye

MC'S-P02

New Generation Nondestructive Test Techniques: Computed Tomography and Real Time X-ray with High Image Quality**Aydın Şakalakoğlu, Özgür Numanoglu, Yasin Kuruoğlu**TÜBİTAK-SAGE
Türkiye

MC'S-P03

Effect of Engine Oil Type on the Wear of Piston-Cylinder**Hakan Yılmaz^{1,2}, Arzu Şencan Şahin²**¹Süleyman Demirel University, ²Istanbul University
Türkiye

MC'S-P04

Various Nozzle Designs Effect on the Polypropylene (PP) Surface Energy in Plasma Activation Treatments of Bumpers**Ekrem Altuncu¹, Sevim Gökçe Esen¹, Fatih Üstel¹, Evren Karayel²**¹Sakarya University, ²Assan Hanil Automotive Industry and Trade Inc.
Türkiye

MC'S-P05

Determination of Isothermal Austenite Grain Growth Model Parameters for SAE 8620H Carburizing Steel**Seçil Yıldız¹, Hasan Yılmaz², Büşra Yazır, G. Elif Evcil, Caner Şimşir, Kemal Davut**Atılım University
Türkiye

MC'S-P06

Characterization of Diamond Tools for Cutting Natural Stones Using Fe-Co-Cu Base Alloy as a Metal Matrix**Berrak Bulut, Onur Tazegül, Murat Baydoğan, Eyüp Sabri Kayalı**İstanbul Technical University
Türkiye

MC'S-P07

Effect of Aluminum Addition on Wear Performance of Niobium Carbonitride Coated AISI 4140 Steel Through Thermo Reactive Diffusion/Deposition Method**Eray Abakay, Mustafa Durmaz, Şaduman Şen, Uğur Şen**Sakarya University
Türkiye

MC'S-P08

Nodularity and Nodule Count Analysis of Austempered Ductile Iron Castings by Digital Image Processing**Kemal Davut¹, Barış Çetin², Ebru Arslan¹, Halim Meço², Cansu Yazganarıkın²**¹Atılım University, ²FNNS Defence Systems Co.Inc.
Türkiye

MC'S-P09

Investigating the Effect of Solution Heat Treatment on 475 °C Embrittlement in 1.4462 Duplex Stainless Steels**Rıdvan Gecü, Alptekin Kısasöz, Ahmet Karaaslan**Yıldız Technical University
Türkiye

MC'S-P10

Solid Particle Erosion Behavior of Cast CuCrZr Alloy**Gülşah Aktaş, Ş. Hakan Atapek, Sinan Fidan, Şeyda Polat**Kocaeli University
Türkiye

MC'S-P11

The Effect of Sample Preparation Method on Volume Fraction of Retained Austenite**Ümran Başkaya, Gözde Karaçalı, Mehmet Bulut Özyiğit, Yasemin Kılıç**Ereğli Iron and Steel Works Co.
Türkiye

MC'S-P12

Effects of Intensive Milling on the Structural Characteristics of Pyrophyllite Ore**Turan Uysal, Mustafa Birinci, Esra Porgalı, Murat Erdemoğlu**İnönü University
Türkiye

MC'S-P13

EBS-D-Based Analysis of Oxide Scales Formed on a Hot Rolled Strip**Gözde Karaçalı¹, Kemal Davut², Dilara Çimen¹, Ümran Başkaya¹**¹Ereğli Iron and Steel Works Co., ²Atılım University
Türkiye

MC'S-P14

Corrosion Behavior of CrN and Cr-Al-N Coatings Formed on AISI D2 Steel**Bülent Kılınc, Mustafa Durmaz, Aydın Karabulut, Uğur Şen, Şaduman Şen**Sakarya University
Türkiye

MC'S-P15

Yüksek Manganlı TWIP Çeliklerinin Otomotiv Ağırlık Azaltma Çalışmalarındaki Kullanım Alanları*The Use of High Manganese Twip Steels in Automotive Weight Reduction Studies***Emre Yiğitoğlu¹, Adem Bakkaloğlu², Mesut Kaya¹, Metin Çallı¹, Nihal Efe¹, Çağlayan Altınok³**¹Coşkunöz Kalıp Makine A.Ş., ²Yıldız Technical University, ³Oyak Renault Otomobil Fabrikaları A.Ş.³
Türkiye

MC'S-P16

Kinetic Study of Titanium Carbide Coating on AISI D2 Steel by Thermo Reactive Deposition Technique**Mustafa Durmaz, Eray Abakay, Uğur Şen, Şaduman Şen**Sakarya University
Türkiye

MC'S-P17

Investigation on Influences of Electrolytes on the Growth Behavior and Microstructure of Plasma Electrolytic Oxidation Coatings on Mg-Al-Sn Magnesium Alloy**Aysun Ayday, S. Can Kurnaz**Sakarya University
Türkiye

MC'S-P18

The Surface Properties of DIN 1.2842 Steel After Heat Treatment**Yıldız Yaralı Özbek, Ahmet İpek**Sakarya University
Türkiye

MC'S-P19

The Fracture Behaviour of DIN 1050 Steel After Heat Treatment**Yıldız Yaralı Özbek, Ahmet İpek**Sakarya University
Türkiye

MC'S-P20

The Surface Treatment to Effect to Surface Properties of 1050 Steel**Yıldız Yaralı Özbek, Ahmet İpek**Sakarya University
Türkiye

MC'S-P21

Tribological and Microstructural Characterization of Natural Diatomite Filled Epoxy Composites**Umut Savacı, Servet Turan**Anadolu University
Türkiye

MC'S-P22

The Effect of Heat Treatment to Surface Properties of DIN 1.2842 Steel**Yıldız Yaralı Özbek, T. Gökkaya**Sakarya University
Türkiye

MC'S-P23

The Influence of Al Elements on the Structure and Hardness of AlxCoCrFeMoNi High Entropy Alloys**Hakan Gaşan, Ersu Lökçü, Akın Özcan**Eskişehir Osmangazi University
Türkiye

MC'S-P24

Investigation of Pack Borided Micro Alloyed Steel**İbrahim Altınsoy, Tuba Yener, Abdülkadir Kızılaslan, İbrahim Özbek**Sakarya University
Türkiye

MC'S-P25

Microstructure and Dry Sliding Wear Resistance of Pulse Plasma Modified AISI 5140 Steel**Aysun Ayday, Volkan Ziya Bayhan, Mehmet Durman**Sakarya University
Türkiye

MC'S-P26

An Investigation of the Effect of Material Size on the Distortion Behavior During Welding**Caner Batıgün**Middle East Technical University
Türkiye

MC'S-P27

Dökme Demirden Üretilmiş Kam Millerinin Aşınma Özelliklerine Isıl İşlemin Etkisi*Effect of Heat Treatment on the Wear Properties of Cam Shaft Made of Ductile Cast Iron***Bahadır Karaca¹, Mehmet Şimşir², Murat Aydın¹**¹Etaş Eksantrik Sanayi A.Ş., ²Cumhuriyet University
Türkiye

MC'S-P28

Dişli Üretimi İçin Toz Metalurjisi Yöntemi ile Üretilmiş Fe-C-Ni-Cu-Mo-B Metal Matrisli Kompozitin Mekanik Özelliklerinin Araştırılması*Investigation of Mechanical Properties of Fe-C-Ni-Cu-Mo-B Metal Matrix Composites by Powder Metallurgy for Gear Production***Tarık Gün¹, Mehmet Şimşir², Fatih Özaydın¹**¹Etaş Eksantrik Sanayi, ²Cumhuriyet University
Türkiye

MC'S-P29

An Investigation on MgO Reinforced Cu Matrix Composites**Gözde Çelebi Efe, Mediha İpek, Sakin Zeytin, Cuma Bindal**Sakarya University
Türkiye

MC'S-P30

The Influence of Sintering Temperature on the Thermal Conductivity of Yb₂O₃ Containing Silicon Nitride Ceramics**Pınar Uyan¹, Servet Turan²**¹Bilecik Şeyh Edebali University, ²Anadolu University
Türkiye

MC'S-P31

Temperature Dependent Young's Modulus Change in Si Doped Fe₆₅Ni₃₅ Invar Alloy**Uğur Can Özöğüt, Aslı Çakır**Muğla Sıtkı Koçman University
Türkiye

MC'S-P32

Evaluation of Microstructure and Wear Behavior of Fe-Based Hardfacing Layer on the 1.2714 Steel**Nurşen Saklakoğlu¹, Gizem İldaş², Simge Gençalp İrizalp¹, İ. Etem Saklakoğlu³, Selçuk Demirok⁴**¹Celal Bayar University,
²Academy Energy Industry and Trade Limited Company,
³Ege University,
⁴Egemen Forge Metal Industry and Trade Limited Company
Türkiye

MC'S-P33

Mechanical Properties of Low Density Pre-alloyed Powder Steels**Yadullah Babayev¹, Swaminadham Midturi²**¹Qafqaz University, ²The University of Arkansas at Little Rock
Azerbaijan, USA

MC'S-P34

Decomposition Sequence of Eutectic Carbides During Cyclic Thermal Treatments at High Temperatures in a Co-Ni -Cr-W-C / PTA Type Deposit Applied to Stainless Steel**Abdelaziz Sellidj, Soltane Lebaili**University of Sciences and Technology Houari Bomedienne
Algeria**Non-Ferrous Metallurgy Symposium****Demir Dışı Metaller Metalurjisi Sempozyumu**

NFM'S-P01

The Effect of Temperature on the Electrowinning of Copper**Arman Ehsani^{1,2}, Ersin Y. Yazıcı², Hacı Deveci²**¹Adana Science and Technology University,
²Karadeniz Technical University
Türkiye

NFM'S-P02

Effect of Hot Isostatic Pressing on Mechanical Properties and Microstructure of as-Cast Ti-6Al-4V Alloys**Asım Zeybek¹, Yusuf Z. Karabay¹, N. Kaan Çalıřkan¹, Aydın Şakakalođlu¹, Nuri Durlu²**¹TÜBİTAK-SAGE, ²TOBB, University of Economics and Technology
Türkiye

NFM'S-P03

Microstructural Evaluation of Thixoforged A380 Alloy Billets Produced by Low Superheat Casting Process**Kerem Altuđ Güler, Alptekin Kısasöz, Ahmet Karaaslan, Gökhan Özer**Yıldız Technical University
Türkiye

NFM'S-P04

Comparative Leaching of Chalcopyrite With Non-Milled and Advanced Milled Flotation Concentrate**Z. Abidin Sarı, Aslıhan Demiraslan, M. Deniz Turan**Firat University
Türkiye

NFM'S-P05

Leaching of Copper from Chalcopyrite Concentrate under Conditions Effective Oxidizing by Using Response Surface Methodology**M. Deniz Turan, Ertuđrul Terzi, Z. Abidin Sarı**Firat University
Türkiye

NFM'S-P06

Evaluation of Statistical Approaching of Hydrometallurgical Copper Extraction from Advanced Milled Flotation Concentrate**Doğukan Boz, Enser Karakaş, Z. Abidin Sarı, M. Deniz Turan**
Firat University
Türkiye

NFM'S-P07

Effect of Chemical Composition and Heat Treatment on Hardness and Wear Properties of 7050 Al Alloy**Erdem Karakulak, Yusuf Burak Küçüker, Adem Karaaslan**
Kocaeli University
Türkiye

NFM'S-P08

Strontium Production from Strontium Oxide Using Vacuum Aluminothermic Process**Mehmet Buğdaycı¹, Ahmet Turan², Y. Cucurachi¹, Onuralp Yücel¹**
¹Istanbul Technical University, ²Yalova University
Türkiye

NFM'S-P09

Aluminum Sheet Production: Heat Treatment of Aluminium and Temper Designations of Aluminium Alloys**Eda Dağdelen, Erkut Aydoğdu, Ali Ulus**
Teknik Alüminyum A.Ş.
Türkiye

NFM'S-P10

Assesment of Melt Quailty Via K-Mold Method**Murat Teke, Yücel Birol**
Dokuz Eylül University
Türkiye

NFM'S-P11

A Brief Overview of Pyrometallurgical Treatments of Marine Ores**Arman Ehsani^{1,2,3}, İlhan Ehsani²**
¹Adana Science and Technology University, ²Hacettepe University,
³Karadeniz Technical University
Türkiye

NFM'S-P12

The Effects of Cr Additions on the Atomic Ordering Properties of Ni-Based Superalloys**Rasim Eriş, Amdulla O. Mekhrabov, M. Vedat Akdeniz**
Middle East Technical University
Türkiye

NFM'S-P13

High Strength Copper Alloys for Extreme Temperature Conditions**Onur Dinçer¹, M. Kaan Pehlivanoğlu¹, Arcan F. Dericioğlu²**
¹TÜBİTAK-SAGE, ²Middle East Technical University
Türkiye

NFM'S-P14

A Review on Uranium and Thorium Studies in Turkey**Murat Alkan¹, Akan Gülmez², Mehmet Ulusoy²**
¹Dokuz Eylül University, ²MTA
Türkiye

NFM'S-P15

Thermodynamic Simulation of Metallothermic Magnesium Production Processes**Onuralp Yücel¹, Mehmet Buğdaycı¹, Ahmet Turan², Murat Alkan³**
¹Istanbul Technical University, ²Yalova University, ³Dokuz Eylül University
Türkiye

NFM'S-P16

The Conversion of Strontium Sulfate to Strontium Carbonate by Using Hydrometallurgical Method**Mert Zorağa, Cem Kahraman, İbrahim Yusufuğlu**
İstanbul University
Türkiye

NFM'S-P17

Fabrication of Porous Cu Film via Electrochemical Dealloying Process**Bayçu Ongunyurt, Burçin Bilici, B. Deniz Polat, Özgül Keleş**
İstanbul Technical University
Türkiye

NFM'S-P18

Aluminum Sheet Production: General Principles of Cold Rolling**Beyza Yeşilbağ Yorulmaz, Bilal Demir, Ali Ulus**
Teknik Alüminyum A.Ş.
Türkiye

NFM'S-P19

Copper Extraction From Palu (Elazığ) Region Malahite Ores**M. Şeref Sönmez, Can Akkaş, Onuralp Yücel**
İstanbul Technical University
Türkiye

NFM'S-P20

Magnesium Alloys in Automotive Industry: Current Status**Tanya Ayca Başer¹, İsmail Durgun¹, Emre Doruk¹,
A.Arslan Kaya²**¹Tofaş A.Ş., ²Muğla Sıtkı Koçman University
Türkiye

NFM'S-P21

**Thermochemical Calculations of Fayalite Type Slags with
Fluxing Agents During Smelting with FactSage****Aydın Ruşen¹, Bora Derin²**¹Karamanoğlu Mehmetbey University, ²Istanbul Technical University
Türkiye

NFM'S-P22

**Severe Plastic Deformation-Induced Precipitation of
Cu-Cr-Zr Alloy****Harun Yanar¹, Muhammet Demirtaş¹, Gençay Pürçek**¹Karadeniz Technical University, ²Bayburt University
Türkiye

NFM'S-P23

**Investigation of Adhesion Properties of Primer Coating on
Al/ EPDM Interface Automotive Seal Applications****Ekram Altuncu¹, Uğursoy Olgun¹, Fatma Mihçı²,
Ali Erkin Kutlu², Kübra Yılmaz²**¹Sakarya University, ²Standart Profil Automotive Industry and Trade Inc.
Türkiye

NFM'S-P24

**Improvement of Heat Treatment Application of Aluminium
Forged Parts****Ömer Sürmen^{1,2}, Mehmet Tarakçı², Yücel Gençer²,
Sakin Zeytin³**¹Kanca Forging Steel Company, ²Gebze Technical University,
³Sakarya University
Türkiye

NFM'S-P25

**Microstructure and Properties of CuCrZr-10Sn Cast and
Aged Alloys****Mustafa Kızılbaş¹, Nuri Solak¹, Hakan Atapek²**¹Istanbul Technical University, ²Kocaeli University
Türkiye

NFM'S-P26

**The Effect of Imidazolidin-2-Thione on Gold and Gold Alloy
Electrodepositions****Kübra Akben, Servet Timur**Istanbul Technical University
Türkiye

NFM'S-P27

**Macroporous 3D Copper Films Prepared by an
Electrochemical Deposition****Ebru Kandil, Gökhan Orhan**Istanbul University
Türkiye

NFM'S-P28

**Electrodeposition of Pure Ni and Ni-Based Composite
Coatings****Büşra Çetin, Tolga Taylı, Gökhan Orhan**Istanbul University
Türkiye

NFM'S-P29

Recovery of Scandium from Lateritic Nickel Ores**Ece Ferizoğlu, Şerif Kaya, Yavuz Topkaya**Middle East Technical University
Türkiye

NFM'S-P30

**Effects of pH and Cobalt Concentration on the Properties
of Nickel – Cobalt Alloy Plating****Mertcan Başkan¹, Metehan Erdoğan², İshak Karakaya¹**¹Middle East Technical University, ²Yıldırım Beyazıt University
Türkiye

NFM'S-P31

**Half Metallicity Ferromagnetism in Half Heusler RbBaB
and RbBaC Compounds: An ab Initio Calculation****Radjaa Benabboun, Dalila Mesri, Abbes Chahed**Dijillali Liabes University of Sidi Bel-Abbes
Algeria**Energy Materials Symposium / Enerji Malzemeleri Sempozyumu**

EM'S-P01

**Investigation of the Co-Dopant Effects on the Ionic
Conductivity of the Ceria Based Electrolytes****Nazlıcan Yüksel, Aliye Arabacı**Istanbul University
Türkiye

EM'S-P02 Capacitive Behavior of Azide Functionalized Graphene Oxide as Electrode Materials**Utkan Şahintürk, Ahmet Ekerim**Yıldız Technical University
Türkiye**EM'S-P03 Ultrafine Grained Tungsten Surfaces for Plasma Facing Applications in Fusion Reactors****Mert Efe¹, Osman El-Atwani²**¹Middle East Technical University, ²Drexel University
Türkiye**EM'S-P04 Improvement of Magnetic Properties of Melt-Spun Produced Nd₂Fe₁₄B Particles During Surfactant-Assisted Ball Milling****Sultan Öztürk¹, Kürşat İçin¹, Bülent Öztürk¹, Uğur Topal², Hülya Kaftelen¹**¹Karadeniz Technical University, ²TÜBİTAK National Metrology Institute
Türkiye**EM'S-P05 The Use of Li₂S as Cathode Material and Optimization for Li-S Batteries****K. Burcu Çelik, Elif Ceylan Cengiz, Rezan Demir-Çakan**Gebze Technical University
Türkiye**EM'S-P06 SnSb/C Composite as Anode Electrode Material for Na-Ion Batteries****Burcu Dursun, Rezan Demir-Çakan**Gebze Technical University
Türkiye**EM'S-P07 SnO₂/ Pyrolyzed Bacterial Cellulose Composites as Anode Materials for Li-Ion Battery****Burcu Dursun, Taner Sar, Meltem Yeşilçimen-Akbaş, Rezan Demir-Çakan**Gebze Technical University
Türkiye**EM'S-P08 Use of Ion Beam Assisted Deposition to Improve the Adhesion of the Structured SiCu Thin Film Anodes Produced by GLAD Method****Deniz B. Polat, Özgül Keleş**İstanbul Technical University
Türkiye**EM'S-P09 The Electrochemical Characterization of Na_{0.44}MnO₂ in Aqueous Electrolytes****Burak Tekin, Serkan Sevinç, Rezan Demir Çakan**Gebze Technical University
Türkiye**EM'S-P10 N-Doped Materials as Anode for Na-Ion Carbonaceous Batteries****Ayşen Zerey, Meral Aydın, Burcu Dursun, Rezan Demir-Çakan**Gebze Technical University
Türkiye**EM'S-P11 Implementation of 12 V Li-Ion Batteries for S&S Micro Hybrid Application****Cem Açıkşarı, Muhsin Mazman, Hatice Doğanay, Serdar Gül, Doğançan Sarıkaya, Ezgi Bilgiç, Öner Toy, Mustafa Kılıçaslan, Ali Alim**Mutlu Akü ve Malzeme A.Ş.
Türkiye**EM'S-P12 Recycling of Lead Lithium Batteries****Doğançan Sarıkaya, Serdar Gül, Muhsin Yazman, Hatice Doğanay, Cem Açıkşarı, Öner Toy, Ezgi Bilgiç, Mustafa Kılıçaslan, Ali Alim**Mutlu Akü ve Malzeme A.Ş.
Türkiye**EM'S-P13 Graphene Wrapped Silicon for High Reversible Lithium Ion Battery Anodes****Mahmud Tokur, Yağmur Tanrıku, Zeynep Özdengül, Şeyma Özcan, Hasan Algül, Tuğrul Çetinkaya, Mehmet Uysal, Hatem Akbulut**Sakarya University
Türkiye

Materials Degradation and Protection Methods Symposium
Malzemelerin Bozunumu ve Korunma Yöntemleri Sempozyumu

- MDPM'S-P01** **Effect of Intermetallic Phases on Corrosion Behaviour of Duplex Stainless Steels**
Aslı Pınar Zorba¹, Özlem Ayşe Özyılmaz¹, Rıdvan Gecü², Alptekin Kısasöz², Ahmet Karaaslan²
Bilgi University¹, Yıldız Technical University²
Türkiye
- MDPM'S-P02** **Pulse Electrodeposition of Ni/WC Coatings**
Muhammet Kartal, Ahmet Alp, Hatem Akbulut
Sakarya University
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- MDPM'S-P03** **Characterization of Pulse Electro Co-Deposited Ni/MWCNT Coatings**
Muhammet Kartal, Ahmet Alp, Hatem Akbulut
Sakarya University
Türkiye
- MDPM'S-P04** **Ni/TiO₂ Nanocomposite Coating Prepared by Direct and Pulse Current Methods**
Gülesin Yılmaz, Gökçe Hapçı Ağaoğlu, Gökhan Orhan
İstanbul University
Türkiye
- MDPM'S-P05** **Microstructure-Corrosion Relationship of Al-12Si**
Cemre Baş, Yurdanur Temel, Eda Ergün Songül, Derya Dışpınar, Gökhan Orhan
İstanbul University
Türkiye
- MDPM'S-P06** **Corrosion Behavior of V Modified A360 Alloy**
Eda Ergün Songül, Derya Dışpınar, Gökhan Orhan
İstanbul University
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- MDPM'S-P07** **Influence of Holding Time on the Modification Efficiency of Sr in A360 Alloy**
İnan Kaan Duygun, Eray Erzi, Derya Dışpınar
İstanbul University
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- MDPM'S-P08** **Synthesis and Characterization of SiO₂ Thin Films by Sol-Gel Dip Coating Technique**
İsmail Oymak, Pelin Karadayı, Nuriye Sarıkaya, Tolga Tavşanoğlu
Muğla Sıtkı Koçman University
Türkiye
- MDPM'S-P09** **Synthesis and Characterization of Nanocomposite ZnO-SiO₂ Thin Films by Sol-gel Dip Coating Technique**
Ayşe Eda Onar¹, Gökçe Şogen¹, Uğur Can Özöğüt¹, Ertuğrul Erkoç², Ayşe Kalemtaş², Tolga Tavşanoğlu¹
¹Muğla Sıtkı Koçman University, ²Bursa Technical University
Türkiye
- MDPM'S-P10** **Corrosion Behaviour of Materials in Waste-Incineration Environments. Case Study**
Brandusa Ghiban¹, Marius Niculescu², Aurora Antoniac¹, Iulian Antoniac¹
¹University Politehnica of Bucharest, ²Titu Maiorescu University
Romania
- MDPM'S-P11** **Direct Graphene Growth on SiO₂ Substrate by using Hot Filament CVD Technique**
Güney Akdaş, İ. Emre Gülkaya, M. Reha Şavaşeri, O. Ağırseven, Mustafa Ürgen
İstanbul Technical University
Türkiye
- MDPM'S-P12** **Aluminizing of Steel Surfaces at High Temperatures by using Cathodic Arc PVD**
Tuğba İpeksaç, Erkan Kaçar, Mustafa Ürgen
İstanbul Technical University
Türkiye
- MDPM'S-P13** **Investigation of Electrochemical Interactions between Hard Coatings and Substrates**
Burçak Avcı, Mustafa Ürgen
İstanbul Technical University
Türkiye

MDPM'S-P14

The Sliding Wear of Aluminum High Silicon Hypereutectic Alloys**Oğuzhan Kaya¹, Pınar Yavuz¹, S. Alper Yeşilçubuk¹, Mustafa Ürgen²**¹Arçelik A.Ş., ²Istanbul Technical University
Türkiye**Casting Symposium / Döküm Sempozyumu**

CS'S-P01

Yalın Üretim Sisteminin Vana Sektöründe Uygulanabilirliği*The Applicability of Lean Manufacturing Into Valve Industry***Mehmet Aksoy, Osman Özhan, Gökhan İntepe, Gökhan Coşkun, Aykut Özman, Sadık Türkavcı, Levent Günaydın, Gökhan Başman**Duyar Vana Makine Sanayi A.Ş.
Türkiye

CS'S-P02

Water Explosion Tendency in Sand-Mold Casting Process**Necip Ünlü**Istanbul Technical University
Türkiye

CS'S-P03

Effect of Ti Addition on Microstructure of Zamak-3 Alloy**İbrahim Altınsoy, Abdulkadir Kızılaslan, İbrahim Özbek**Sakarya University
Türkiye

CS'S-P04

Effect of Niobium Addition in Grey Cast Iron on Mechanical Properties**Mehmet Ragıp Muhaffel, Gökhan Yıldırım**Ferro Döküm
Türkiye

CS'S-P05

Effect of Ag Addition on Castability of Al-4.5 Cu Alloy**Kerim Yıldırım, Melike Helvacı, Eda Ergün Songül, Eray Erzi, Derya Dışpınar**Istanbul University
Türkiye

CS'S-P06

Excess Sr Addition and its Effect on Porosity of A356**B. Atakav¹, Özen Gürsoy¹, Çağlar Yüksel², Eray Erzi¹, Derya Dışpınar¹**¹Istanbul University, ²Yıldız Technical University
Türkiye

CS'S-P07

Optimization of Production Parametres for Semisolid Casting of 6082**Ö. Vardar¹, İ. Ergün¹, Çağlar Yüksel², Eray Erzi¹, Derya Dışpınar¹**¹Istanbul University, ²Yıldız Technical University
Türkiye

CS'S-P08

Effect of Heat Treatment Parameters on Material Properties of AISI 4140 Steel**Melek Cumbul Altay, Gamze Durmaz**Istanbul University
Türkiye**Iron and Steel Metallurgy Symposium
Demir Çelik Metalurjisi Sempozyumu**

ISM'S-P01

Sürekli Döküm Prosesinde Ortaya Çıkan Bindirme Ara Slablarının Kimyasal Kompozisyonun İncelemesi*Investigation of Composition of Mixing Slab Produced in Continuous Casting Process***İlker Ayçiçek, Cemre Keçeci**İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye

ISM'S-P02

Cüruf Potalarında Skal Düşmemesine Bağlı Problemlerin Çözümü*Solution for the Problems Linked to the Undrop of Slag Recycling Scrap in the Slag Ladles***Mehmet Gökoğlu, Kamil Eken, Halim Serkan Çağırdaç**İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye

ISM'S-P03

Çift Fazlı Çeliklerde Mikroyapının Mekanik Özelliklere Etkisi*Effect of Microstructure on Mechanical Properties of Dual Phase Steel***Yüksel Bilir**İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye

ISM'S-P04

3.Yüksek Fırın 4.Soba Yanma Kamarası Tamiri*Hot Stove #4 Combustion Chamber Repair" of Blast Furnace #3***Fatih Şatır, Özhan Uzun, Sabri Kılıç**İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye

ISM'S-P05

Şarj Pota Taban Refrakter Çalışma Astar Ömrünün Arttırılması*Campaign Life Extension of Bottom Refractory Working Lining at Transfer Ladles***Memduh Kırca, Fatih Şatır, Özhan Uzun**İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye

ISM'S-P06

İsdemir'de API-5L PSL2 X70 Kalite Bobin Üretimi, Uygulanan Testler ve Mekanik Özelliklerinin İyileştirilmesi*API-5L PSL2 X70 Quality Coil Production in Isdemir, Tests Carried, Improvement of Mechanical Properties***Muhammet Bilen**İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye

ISM'S-P07

Tungsten Karbür Parçaların AISI 5140 Çeliğine Gümüş ve / veya Bronz Kaynağı ile Birleştirilerek Yüksek Fırında Döküm Açmak için Kullanılması ve Avantajları*Advantages and Usage of Combining Tungsten Carbide Pieces to AISI 5140 Steel With Silver or Bronze Welding Method on Blast Furnace Tap Hole Drilling Operation***Ümit Gebenli, Emir Azazoğlu, İbrahim Çakmak**İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye

ISM'S-P08

S235 JR Kalite Çeliklerin Deney Tasarımı Yaklaşımı ile Mekanik Özelliklerinin Modellenmesi ve Maliyet Avantajı ile Üretimi*The Statistical Modeling of the Mechanical Properties and Production Cost Advantages of S235 JR Grade Steel***İlker Ayçiçek**İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye

ISM'S-P09

Numune Alma ve Hazırlama Süreçlerinin Çelikteki Toplam Oksijen Tayinine Olan Etkisinin İncelenmesi*Investigation of the Effect of Sampling and Preparation Process of Determination of Total Oxygen in Steel***Sadık Polat, Erhan Selvi**İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye

ISM'S-P10

Tav Fırınında Damper Modifikasyonu ile Doğal Gaz ve Tufal Miktarının Azaltılmasının Avantajları*Advantages of Reducing the Natural Gas and Scale Quantity with the Damper Modification in Reheating Furnace***Hamdi Gül, Mehmet Beyazıt Gedik**İskenderun Demir Çelik Fabrikaları A.Ş.
Türkiye

ISM'S-P11

Estimation of Non-Metallic Inclusions in Steelmaking Process by Using Thermodynamic Calculation Software**Emre Alan, Zafer Çetin**Ereğli Iron and Steel Works Company
Türkiye

ISM'S-P12

Surface Hardening of R260 Grade Rail Steels with High Power Diode Laser**Ozan Yazıcı, Suat Yılmaz**İstanbul University
Türkiye

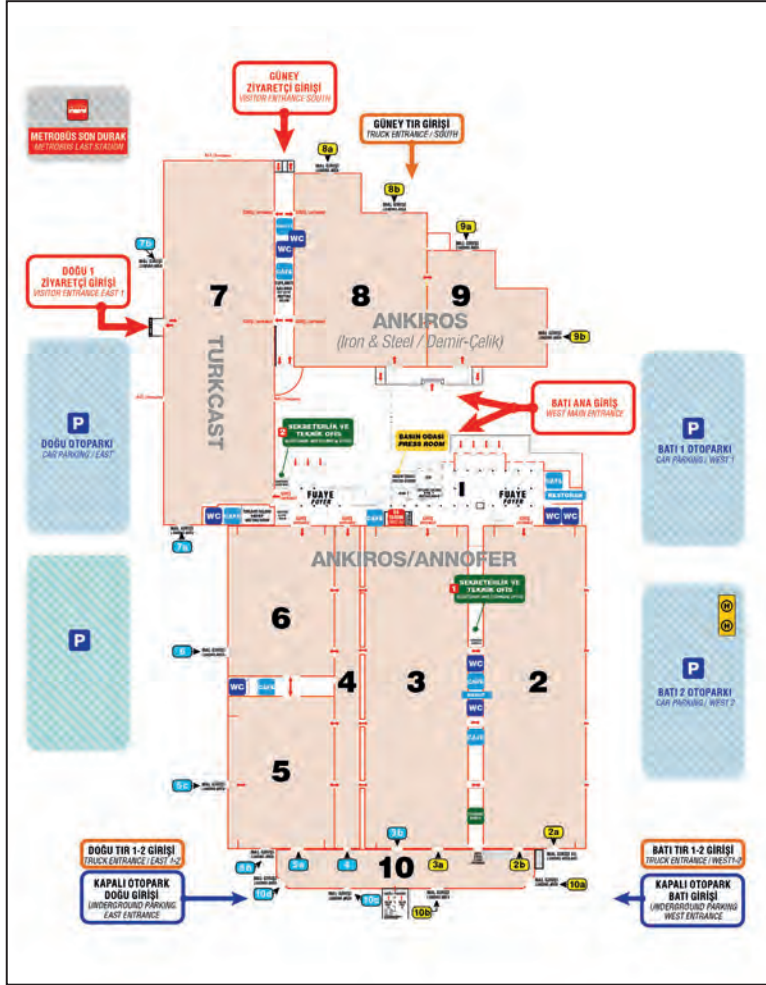
ISM'S-P13

Çemtaş Çelik Fabrikasında Kalıntı Kontrolü*Inclusion Control at Çemtaş Steel Plant***Berkay Şahin¹, İsmail İrfan Aryan¹, Mehmet Akpınar¹, Naci Sevinç²**¹Çemtaş Çelik Makine Sanayi, ²Atılım University
Türkiye

ISM'S-P14 Correlation of Interstitial Free (IF) and Bake Hardening (BH) Sheet Steel Surface Parameters and Effect on the Paint Appearance Quality**Doğukan Sara, Yasemin Kılıç, Oğuz Gündüz**Ereğli Demir ve Çelik Fabrikaları T.A.Ş.
Türkiye**ISM'S-P15 Usability of Blast Furnace Flue Dust in Solid-State Reduction of Manganese Ore Concentrate in The AIM of Ferromanganese Production****İbrahim Özdemir, Fikri Erdem Şeşen, Mustafa Kelami Şeşen**İstanbul Technical University
Türkiye**ISM'S-P16 Effect of Austenitizing and Tempering Temperatures on the Mechanical Properties of Hot Forged AISI 4140 Steel****Gürkan Balıkcı¹, İbrahim Özbek²**¹Omtaş Otomotiv Transmisyon Aksami A.Ş., ²Sakarya University
Türkiye**ISM'S-P17 Machinability With Different Cutting Parameters of Sintered Steels****Nuray Beköz Üllen**İstanbul University
Türkiye**ISM'S-P18 Characterization and Sintering of Water Atomized M3/2 High Speed Steel****Şerafettin Eroğlu**İstanbul University
TürkiyeIMMC
2016**HOW TO GET TO TÜYAP & ABOUT ISTANBUL**
TÜYAP ALANINA ULAŞIM & İSTANBUL HAKKINDA

TÜYAP FAIR CONVENTION & CONGRESS CENTER, TRANSPORTATION & ACCOMMODATION

Fair Ground



TÜYAP FAIR CONVENTION & CONGRESS CENTER, TRANSPORTATION & ACCOMMODATION

Fair Ground

ANKIROS 2016 takes place at TUYAP Fair and Congress Centre, Buyukcekmece, Istanbul. TUYAP is Turkey's prominent and one of the most respectable fair venues.

TUYAP is located in Beylikduzu/Buyukcekmece and it is easily accessible by bus or car. It is only 15 km to Istanbul Ataturk International Airport, takes nearly 25 minutes to/from the Istanbul International Ataturk Airport and it is a 45-minute drive from Taksim Square, the city center.

TUYAP Fair, Convention & Congress Center accommodates services for exhibitors and visitors

- Toplam 10 salonda 42.000 m2 sergileme kapasitesi,
- Uluslararası standartta teknik altyapı,
- Basıncılı hava sistemi, temiz ve atıksu sistemi, toplam 11.200 kW/h trafo gücü ve elektrik donanımı,
- 10.000 m2 genel sosyal yaşam alanı, tam ofis donanımlı basın, özel protokol ve yönetim odaları,
- Tamamen iklimlendirilmiş ideal çalışma ve sergi ortamı,
- Toplantı, seminer, panel, vb. etkinlikler için ihtiyaca özel hazırlanmış toplam 8.000 m2 de 11 adet 50 kişiden 750 kişiye kadar farklı boyutlarda toplantı salonu,
- Çokkamaçlı kullanıma uygun 10 ayrı sergi salonu,
- 10.000'er kişilik toplantı, konferans veya konser salonuna dönüştürülebilecek 3 salon,
- 4000'er kişilik toplantı salonuna dönüştürülebilecek 2 ayrı salon,
- 2000'er kişilik toplantı salonuna dönüştürülebilecek 3 ayrı salon,
- 10.000 kişilik Türkiye'nin en büyük lokantasına dönüştürülebilecek salonlar,
- 7 ayrı kafeterya ve 1 a la carte lokanta,
- 4.500 araçlık katılımcı ve ziyaretçi açık otoparkı, TIR otoparkı,
- TOTAL benzin istasyonu - Günlük ihtiyaçlar için market,
- McDonalds fast food lokanta (arabaya servis),
- Taksidurağı

Getting to the Fairground

The fairground is approximately 25 minutes far from the Istanbul Atatürk Airport and 45 minutes from the city center (Taksim Square).

Address:

TUYAP Fuar ve Kongre Merkezi E-5 Karayolu , Gurpinar Kavşagi Beylikduzu / Buyukcekmece 34522 Istanbul



By personal vehicles:

Via Boğaziçi Bridge (1st Bridge) / Via E-5 (Peripheral Highway)

- Enter E-5 from Boğaziçi Bridge or any other entrance
- Follow the peripheral highway;
- Continue to Küçük Çekmece direction;
- Continue to Avcılar direction;
- After passing by 'Tatilya', enter the fairground at Beylikduzu.

Via Fatih Sultan Mehmet Bridge (2nd Bridge) / Via TEM

- Enter TEM from Fatih Sultan Mehmet Bridge or any other entrance;
- Continue to Edirne direction;
- Take the Hadımköy / Büyükçekmece exit;
- Enter the fairground at Beylikduzu.

Via Bus or Metrobus:

There are İETT bus services from Taksim to the fairground. However, we advise not to take the bus but to take a taxi for our visitors coming outside of Istanbul.

There are free shuttle services available for our visitors who arrive at Avcılar using the Metrobus.

Via Airway:

Visitors arriving at Istanbul Atatürk Airport can take a taxi to go to the fairground.

Via Seabus:

There are free shuttle services available for our visitors who arrive at Bakırköy using the seabuses.

Free Shuttle Services

Bakırköy Seabus Port

29 September / 01 October

Departure: 09:30 10:30 11:15 12:30

Return: 16:00 17:00 18:00 18:45

In Front of Taksim AKM (Ataturk Cultural Center)

Departure: 08:30

Return: 18:30

Atatürk Airport Domestic and International Arrival

Departure: 09:00 10:00 11:00 12:00

Return: 16:00 17:00 18:00 19:00

Yıldız Technical University Davutpaşa Campus

Metallurgical - Engineering Department

Departure: 08:30

Return: 18:30

I.T.U Maslak Campus Metallurgical - Engineering Department

Departure: 08:30

Return: 18:30

Accommodation

There are several five- and four-stars hotels in the area, which are 5 to 20 minutes far from the fairground and airport. You can make reservations to these hotels through our official travel agent and benefit from the special rates.

Free Bird Travel

Gümüşsuyu İnönü Caddesi, Kunt Apt. No:25, Kat:5, Daire:6

Tel: +90 212 465 07 58

Faks: +90 212 465 00 91

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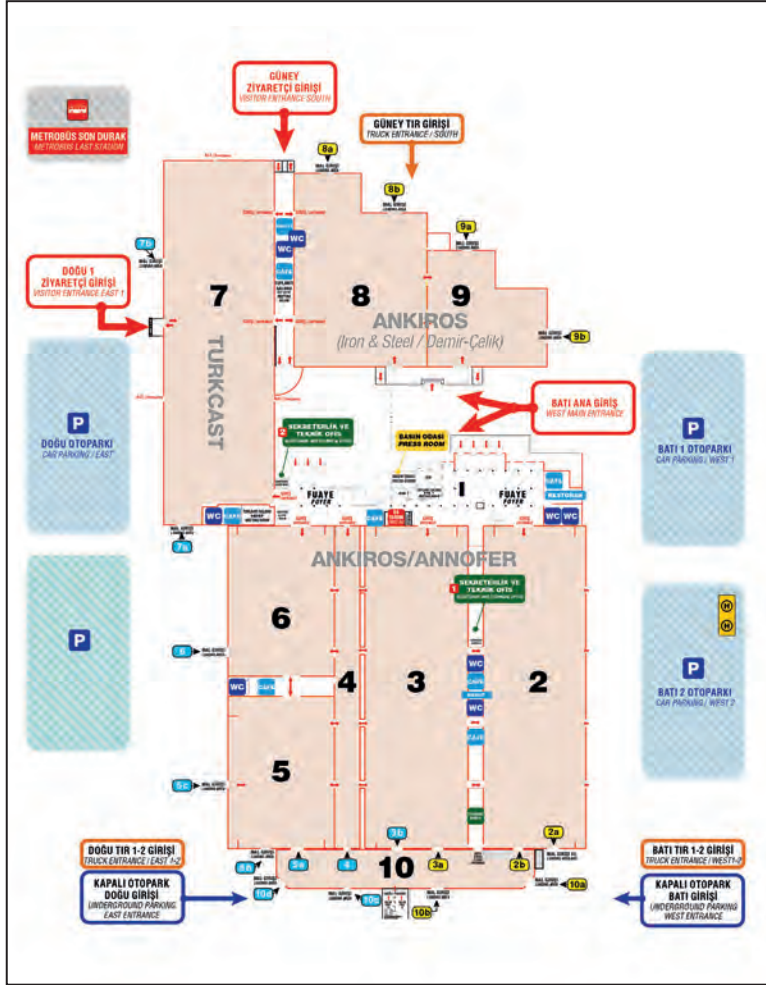
Please refer to our official travel agent for any questions/problems about accommodation and transportation related to ANKIROS 2016.

The services offered by the official travel agent are:

- Airline tickets reservation and sales
- Hotel accommodation
- Car rentals
- Transfers on arrival and departure
- Cocktail organisations
- Daily city tours
- Pre and post exhibition tours and partners program

TÜYAP FUAR VE KONGRE MERKEZİ ULAŞIM VE KONAKLAMA

Fuar Alanı



TÜYAP FUAR VE KONGRE MERKEZİ ULAŞIM VE KONAKLAMA

Fuar Alanı

ANKİROS 2016 Fuarı, TÜYAP Fuar ve Kongre Merkezi, Büyükçekmece, İstanbul'da gerçekleştirilecektir.

TÜYAP Fuar ve Kongre Merkezi, ülkemizin en tecrübeli, tanınmış ve saygın fuar alanlarından biridir. Her yıl, çok sayıda uluslararası fuara ev sahipliği yapmaktadır. TÜYAP Fuar ve Kongre Merkezi'nin Atatürk Havaalanına uzaklığı ise 15 km'dir.

TÜYAP Fuar ve Kongre Merkezi katılımcı ve ziyaretçilere her türlü hizmeti sağlayacak şekilde tasarlanmıştır;

- Toplam 10 salonda 42.000 m² sergileme kapasitesi,
- Uluslararası standartta teknik altyapı,
- Basıncılı hava sistemi, temiz ve atıksu sistemi, toplam 11.200 kW/h trafo gücü ve elektrik donanımı,
- 10.000 m² genel sosyal yaşam alanı, tam ofis donanımlı basın, özel protokol ve yönetim odaları,
- Tamamen iklimlendirilmiş ideal çalışma ve sergi ortamı,
- Toplantı, seminer, panel, vb. etkinlikler için ihtiyaca özel hazırlanmış toplam 8.000 m² de 11 adet 50 kişiden 750 kişiye kadar farklı boyutlarda toplantı salonu,
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- TOTAL benzin istasyonu - Günlük ihtiyaçlar için market,
- McDonalds fast food lokanta (arabaya servis),
- Taksidurağı

Ulaşım

IMMC 2014, TÜYAP Fuar ve Kongre Merkezi, Büyükçekmece, İstanbul'da düzenlenecek. Fuar alanı, İstanbul Atatürk Havaalanı'na 25 dakika ve şehir merkezine (Taksim Meydanı) 45 dakika mesafede bulunmaktadır.

Adres:

TÜYAP Fuar ve Kongre Merkezi, E-5 Karayolu, Gürpınar Kavşağı, Beylikdüzü / Büyükçekmece 34522 İstanbul



ANKIROS 2016 Fuarı'na ulaşım için gerekli bilgiler aşağıdadır.

Kişisel Araç ile:

- Boğaziçi Köprüsü (1. Köprü) / E-5 (ÇevreYolu) ile
- Boğaziçi Köprüsü üzerinden veya diğer bir girişten E-5'e (ÇevreYolu) giriş;
- ÇevreYolu'nu takip;
- Küçükçekmece yönüne devam;
- Avcılar yönüne devam;
- Tatilya'yı geçtikten sonra Beylikdüzü'nde TÜYAP fuar alanına giriş.

Fatih Sultan Mehmet Köprüsü (2.Köprü) / TEM ile

- Fatih Sultan Mehmet Köprüsü üzerinden veya diğer bir girişten TEM'e giriş;
- Edirne yönünü takip;
- Hadımköy / Büyükçekmece çıkışından çıkış;
- Beylikdüzü'nde TÜYAP fuar alanına giriş.

Otobüs ve Metrobüs ile:

Fuara Taksim'den İETT otobüs servisleri bulunmaktadır. Fakat İstanbul dışından gelen misafirlerimizin otobüsü tercih etmemelerini, bunun yerine taksiyi kullanmalarını öneririz. Metrobüs kullanarak herhangi bir duraktan Avcılar'a kadar gelen ziyaretçilerimiz için fuar alanına kadar tahsis edilen ücretsiz servislerimiz bulunmaktadır.

Havayolu ile:

Havayolu ile gelen ziyaretçiler Atatürk Havaalanı'ndan fuar alanına taksi ile ulaşabilirler. Deniz otobüsü ile: Deniz otobüsü ile Bakırköy'e gelen ziyaretçiler fuar alanına ulaşımında ücretsiz servislerimizden faydalanabilirler.

Ücretsiz Servisler

Bakırköy Deniz Otobüsü İskelesi

29 September / 01 October

Kalkış: 09:30 10:30 11:15 12:30

Dönüş: 16:00 17:00 18:00 18:45

Taksim AKM Önünden (Atatürk Kültür Merkezi)

Kalkış: 08:30

Dönüş: 18:30

Atatürk Havalimanı İç Hatlar ve Dış Hatlar Geliş

Kalkış: 09:00 10:00 11:00 12:00

Dönüş: 16:00 17:00 18:00 19:00

Yıldız Teknik Üniversitesi Davutpaşa Kampüsü - Metalurji ve Malz.Müh. Bölümü

Kalkış: 08:30

Dönüş: 18:30

İTÜ Maslak Kampüsü - Metalurji ve Malz.Müh. Bölümü

Kalkış: 08:30

Dönüş: 18:30

Konaklama

Fuar alanı çevresinde 4 ve 5 yıldızlı oteller bulunmaktadır. Bu oteller havaalanına ve fuar alanına 5 ila 20 dakika uzaklıktadır. Otellere rezervasyonlarınızı resmi seyahat acentemizin vasıtasıyla yapıp özel fiyatlardan yararlanabilirsiniz. Resmi seyahat acentesi Free Bird Travel'dır.

Free Bird Travel

Gümüşsuyu İnönü Caddesi, Kunt Apt. No:25, Kat:5, Daire:6

Tel: +90 212 465 07 58

Faks: +90 212 465 00 91

Alina ERGÜL

alina.ergul@freebirdtravel.com

M: 0 (530) 290 09 49

Bartuğ ÖZDEK

bartug.ozdek@freebirdtravel.com

M: 0 (530) 035 79 57

Seyahat acentesinin sunmuş olduğu hizmetler:

- Uçak bileti rezervasyonu ve satış
- Otel konaklama
- Araba kiralama
- Transfers on arrival and departure
- Kokteyl organizasyonu
- Günlük şehir turları
- Fuar öncesi ve sonrası turlar

**IMMC
2016**

HELLO TO ISTANBUL
İSTANBUL'A MERHABA

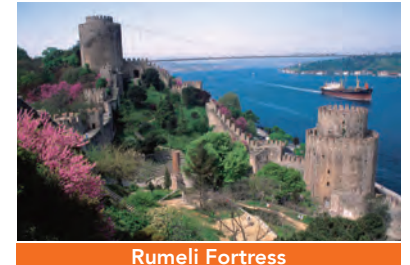
HELLO TO ISTANBUL



Located in the center of the Old World, Istanbul is one of the world's great cities famous for its historical monuments and magnificent scenic beauties. It is the only city in the world which spreads over two continents: it lies at a point where Asia and Europe are separated by a narrow strait - the Bosphorus. Istanbul has a history of over 8,000 years, and ever since its establishment on this strategic junction of lands and seas, the city has been a crucial trade center. The historic city of Istanbul is situated on a peninsula flanked on three sides by the Sea of Marmara, the Bosphorus and the Golden Horn. It has been the capital of three great empires, the Roman, Byzantine and Ottoman empires, and for more than 1,600 years over 120 emperors and sultans ruled the world from here. No other city in the world can claim such a distinction. During its development, the city was enlarged four times, each time the city walls being rebuilt further to the west.



Halıc



Rumeli Fortress

Surrounded by 5th century Roman city walls and stretching over seven hills, Istanbul is adorned by the masterpieces of Turkish art, the great mosques of the Sultans that crown the hills. The city presents an exquisite, majestic and

serene silhouette from all directions. The Golden Horn, which is a very secure natural harbor, has played a significant role in the development of the city.

Fortune provided such advantages to Istanbul as a location at a junction where the main overland routes reach the sea, an easily defensible peninsula, an ideal climate, a rich and generous nature, control of the strategic Bosphorus, and a central geographical position in the ancient world.

As a capital of empires, the city was not only an administrative, but also a religious center. The Patriarchate of Eastern Christians has been headquartered here since its establishment, and the largest early churches and monasteries of the Christian world rose in this city on top of the pagan temples.

Between the 16th century when the Ottoman sultans acquired themselves the title of the "Caliph of Islam" and 1924, the first year of the Republic, Istanbul was also the headquarters of the Caliphate. More Jews settled in Istanbul than any other port, and here they built themselves a new and happy life after they were rescued from Spain by the Turks in the 15th century. Istanbul has always been a city of tolerance where mosques, churches and synagogues existed side by side. The city was adorned with a large number of dazzling and impressive works even during the period of decline of the Ottomans.

During this time, the influence of European art made itself felt in the new palaces, while the northern slopes of the Golden Horn, Galata and Beyoglu districts assumed a European character. Even when the Empire, which was a party to World War I, collapsed and the young Republic that replaced it moved the capital to Ankara, Istanbul did not lose its significance.

The haphazard development that began in the years following World War II and accelerated in the 1950's has unfortunately had a negative impact on the fabric of the old city, and while old wooden houses disappeared rapidly, concrete buildings proliferated. Istanbul experienced a population explosion due to immigration, and within a very short period it expanded far beyond the historical city walls.

With the initiatives for saving the city in the 1980s, Istanbul embarked on a process of restructuring on a scale unseen in its history. Thousands of buildings along the Golden Horn were demolished to make way for a green belt on its shores; parks and gardens were built on the land claimed by filling up the

beaches of the Sea of Marmara. In order to prevent sea pollution drainage systems were completed and physical and biological wastewater treatment plants were erected; the use of natural gas for heating has considerably reduced air pollution.

Efforts are continuing for the restoration of the Roman city walls, and Beyoglu, the main artery, was rescued by building a new avenue. Improvements were made in the general cleaning, maintenance, garbage collection fields and these services are now at Western European standards. Ring roads cross the Bosphorus over two suspension bridges to connect the two continents. The European side has now a fast tramway system and a subway, and comfort and speed has been ensured in sea transportation with the hydrofoil terminals built on the seashores. All industrial establishments on the historic peninsula have been moved to new facilities in the suburbs, and the new international bus terminal has reduced traffic intensity.

CLIMATE OF ISTANBUL

The inhabitants of Istanbul enjoy all four seasons. A short spring, ideal summer temperatures, a long autumn with blue skies, and a rainy winter... The Bosphorus dons the purple of the Judas-tree groves in the spring.

The parks and gardens are decorated with tulips and other flowers. March is a cool, rainy month, but April and May are exactly what one expects of the spring. June is half spring, half summer. An old saying advises one "not to bathe in the sea before you see the rind of a watermelon". It is possible to bathe in the seas of Istanbul until the end of September.

In July and August, except for perhaps two or three hot weeks, there are sometimes even cloudy or cool days. The weather can be undependable in a region with such a blending of lands and seas. Morning clouds may clear toward noon and invite the sun. There are few days of frost or snow. The main winds throughout the year are the cool and rainy "poyraz" from the south, and the warm "lodos" from the north. The last severe winter within the city boundaries was experienced in 1978 when the airport had to be closed partially for three days. For those who long for the snow, the winter sports center in Uludag, Bursa is not far away.

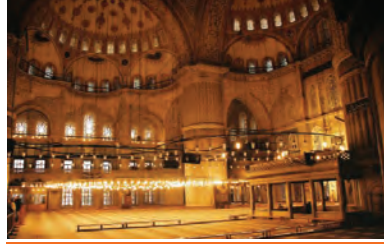
Alongside the efforts involving wastewater infrastructure, the seawaters are in the process of being cleaned and Istanbul is returning to its pre-pollution times of rich bathing opportunities. The beaches on the coast of the Black Sea, the Marmara, and the Princes' Islands are all less than one hour away from the center, and swimming is possible throughout the summer months.

Only experienced swimmers should attempt the currents of the cool Bosphorus. On windy days, the Black Sea is like the ocean. No other city in the world has beaches that are so safe and so close to the city, and seawaters with salt levels to suit every taste. Older inhabitants remember the days when they bathed in the Golden Horn; maybe it will be possible to do so again before the year 2004.





Maiden's Tower



Sultanahmet Mosques

DON'T GO WITHOUT

- Seeing the Mosques of Süleymaniye and Sultan Ahmet (also known as the Blue Mosque);
- Visiting the Ayasofya and Chora Museums;
- Visiting the Topkapı and Dolmabahçe Palaces and the Rumeli Fortress;
- Taking the ferry up the Bosphorus and to the Princes' Islands;
- Watching the panorama of the city from the Galata Tower and the Pierre Loti;
- Enjoying the cultural and artistic activities;
- Wondering and joining the life of entertainment;
- Visiting the Ortaköy market;
- Riding the phaeton in Büyükdada (island);
- Eating fish at a restaurant on the Bosphorus, at Kumkapı or Flower Passage; eating yoghurt at Kanlıca and profiterol at Beyoğlu;
- Buying a rug, jewelry, leatherwear at the Grand Bazaar, Turkish delight, baklava, pastrami and candy at the Spice Bazaar;
- Shopping at Beyoğlu and other mega sized shopping malls.

FOR A SHORT VISIT

Have you got only a short period of time to visit this beautiful city? No need to worry- there are choices of "tasting Istanbul" even in a short period of time.

Daily excursions available throughout the year will give you the chance to visit the most important historical sites, museums, famous Grand Bazaar and surroundings. Excursions departing from hotels of the port present to you the monuments in the historical peninsula in half-day tours. You get a chance to visit Ayasofya Museum, the Mosque of Süleyman the Magnificent, the Mosque of Sultan Ahmet (also known as Blue Mosque), Hippodrome and Topkapı Palace Museum. You may also participate in tours taking you on the Bosphorus or to the Asian side. Then, you will go back home with unforgettable and beautiful memories.



Ortaköy Mosques

The Roman fortifications, Chora (Kariye) Museum renowned for its late Byzantine period frescoes and mosaics, the Galata Tower for a splendid panorama of the city, Dolmabahçe Palace on the Bosphorus - the richest palace museum in the world, Archaeological Museums, Turkish-Islamic Arts Museum, the Spice Bazaar and others require 3 to 4 days' time.

And cruising Bosphorus... A ferry ride on the Bosphorus will be amongst the most unforgettable. You may be carried away with the unparalleled beauty of the yalı mansions lining along the coasts and from which many ancient love stories reflect on the water, luxurious modern villas of the 20th century, the palaces of Dolmabahçe, Beylerbeyi and Göksu, Rumeli and Anadolu Fortresses, remnants of the fishing villages, restaurants, tea gardens, and night clubs. In the same day you can cool off in the waters of the Black Sea and then relax with a cup of coffee at a tea garden on the quiet coasts of the Sea of Marmara enjoying the beauty of the Istanbul Straits.

Istanbul is a place where the ancient meets the modern. For shopping there is a great variety of choices. The Grand Bazaar and the big reputable shops by it, the shopping malls of Ak Merkez, Galleria, Capitol and many more, the boutiques at Nişantaşı and Beyoğlu and in the Baghdad Street are at your service all through the year.

The Grand Bazaar still retains the dreamlike atmosphere of the "good old days," yet, it presents you with the newest choices of the modern world: eye-catching jewelry, copperwork, rugs, leatherwear, suede wear, and many more... Once caught by it, you may lose track of time strolling in the Grand Bazaar.



Spice Bazaar



Ayasofya Museum

Our greetings and love from the beautiful Istanbul, home of many civilizations.

TRANSPORTATION

Intercity Travel

As the only sea route between the oil-rich Black Sea and the Mediterranean, the Bosphorus is one of the busiest waterways in the world; more than 200 million tonnes of oil pass through the strait each year, and the traffic on the Bosphorus is three times that on the Suez Canal. The city's main cargo port, the Port of Haydarpaşa, is Turkey's third-largest, with an annual cargo capacity of 5.9 million tonnes.

International rail service from Istanbul launched in 1889, with a line between Bucharest and Istanbul's Sirkeci Terminal, which ultimately became famous as the eastern terminus of the Orient Express between Paris and Istanbul. After Istanbul's Haydarpaşa Terminal opened in 1908, it served as the western terminus of the Baghdad Railway and an extension of the Hejaz Railway; today, neither service is offered directly from Istanbul. Service to Ankara and other points across Turkey is normally offered by Turkish State Railways, but construction of Marmaray and the Istanbul-Ankara high-speed line forced the station to close in February 2012.

Private bus companies operate routes along, but also well beyond, those offered by the rail network. Istanbul's main bus station is the largest in Europe, with a capacity of 15,000 buses and 600,000 passengers each day. Direct bus service is available to as far as Frankfurt, 1,870 kilometers (1,160 mi) away.

Istanbul has two international airports, the larger of which is Atatürk International Airport. Atatürk International, located 24 kilometers (15 mi) west of the city center, handled 37.4 million passengers in 2011. Sabiha Gökçen International Airport opened on the Asian side of the city, 45 kilometres (28 mi) east of the European city center, to relieve Atatürk International. Sabiha Gökçen is dominated by low-cost carriers, with destinations in Europe, the Middle East and North Africa. And was named the world's fastest growing airport by Airports Council International in 2011.

Local Travel

Istanbul's local transportation system is a complex network of trams, funiculars, light-rail lines, metro lines, buses, bus rapid transit, and even ferries.

Operated by Istanbul Electricity, Tramway, and Tunnel (İETT), trams slowly returned to the city beginning in 1990, with the reopening of the route along İstiklal Avenue. Today, Istanbul's modern tram line, which goes between Kabataş and Bağcılar, has a daily ridership of 265,000 people.

The Tünel (F2) opened in 1875 as the world's second-oldest subterranean rail line (after London's Metropolitan Railway); it still carries passengers between Karaköy and Beyoğlu along a steep 573-meter (1,880 ft) track. The two sides of Istanbul's metro will ultimately be connected under the Bosphorus when the Marmaray tunnel, the first rail connection of any kind between Thrace and Anatolia, is completed in 2015.

Until then, ferries compose the primary mode of public transportation between the European and Asian halves of the city. İDO (Istanbul Seabuses) runs a combination of all-passenger ferries and car-and-passenger ferries to ports on both sides of the Bosphorus, as far north as the Black Sea.

Source: english.istanbul.gov.tr

İSTANBUL'A MERHABA



Eski Dünyanın merkezinde yer alan İstanbul tarihi abideleri ve şahane tabii manzaraları ile ünlü, önemli bir megapoldür. Asya ile Avrupa Kıtaları'nın dar bir deniz geçidi "Boğaziçi" ile ayrıldığı yerde, iki kıta üzerinde kurulu tek şehirdir. 8000 yılı aşan bir tarihe sahip olan İstanbul, deniz ve karaların kucaklaştığı bu stratejik bölgede kuruluşunu takiben önemli bir ticaret merkezi olmuştur. Tarihi İstanbul şehri üç tarafını Marmara Denizi, Boğaziçi ve Halic'in sardığı bir yarım ada üzerinde yer alır. Burası 3 dünya imparatorluğuna, Roma, Bizans ve Osmanlı Türkleri'ne başkent olmuş, 1600 yılı aşan bir süre boyunca 120 den fazla imparator ve sultan burada hüküm sürmüştür. Dünyada bu özelliğe sahip tek şehirdir. Gelişim sürecinde surlar her defasında daha batıya inşa edilerek şehir 4 defa genişletilmiştir.



Haliç



Rumeli Hisarı

5.yy Roma devri surları ile çevrili, 7 tepe üzerine kurulu İstanbul, Türk sanatının şaheser eserleri, buralara kondukları "taşlar" gibi, Sultan camileri ile süslüdür. Şehrin silüeti her yönden güzel, muhteşem ve huzur

verici bir manzaradır. Çok emin bir tabii liman olan Haliç şehrin gelişmesinde önemli rol oynamıştı. Ana yolların denize ulaştığı kavşak noktasında yer alması, kolay savunulur bir yarım ada, ideal iklim, zengin ve cömert tabiat, stratejik Boğaziçi'nin kontrolü gibi özellikler ve coğrafi konumunun dünyanın merkezinde bulunması İstanbul'un kismetidir.

İmparatorluklar başkenti olduğu sıralarda, devlet ile birlikte dinlere de idari merkez olmuş, Doğu Hıristiyanlığı Patrikliği kurulduğu zamanlardan günümüze kadar bu şehirde üslenmiş, Hıristiyan dünyasının en büyük ilk kilise ve manastırları buradaki pagan mabetlerinin üzerinde yükselmişti.

Osmanlı Sultanlarının İslam Dini'nin halifeleri olduğu 16.yy dan Cumhuriyetin ilk yılı 1924 e kadar bu sembolünde merkezi İstanbul'dur. Yahudilik her liman şehrinde olduğundan daha fazla İstanbul'da yerleşmiş, 15.yy da Türk'lerin İspanya'dan kurtarıp getirdikleri de mutlu, yeni hayat tarzına bu şehirde başlamışlardı.

İstanbul, cami, kilise ve sinagogların yan yana mevcudiyetlerini sürdürdüğü bir toleranslar merkezi olagelmıştır. Osmanlı İmparatorluğu çöküş yıllarında şehir, zengin, gösterişli bir çok eser ile süslenebilmiş, saraylar Avrupa sanatının tesirinde yapılmış, Haliç'in kuzey yamaçları Galata ve Beyoğlu semtleri Avrupalı kimliklerine bürünmüşlerdi.

1980'li yıllarda başlayan kurtarma hamleleri ile İstanbul tarihinde görmediği bir yeniden yapılanma sürecine girer. Haliç kıyılarında binlerce yapı istimlak edilerek kıyı boyu yeşil kuşakla çevrelenmiş, Marmara Denizi kıyıları doldurularak park ve bahçelerle donatılmıştır. Drenaj sistemleri tamamlanarak, atık sular fiziki ve biyolojik arıtılmış, şehri çevreleyen denizlerin kirlenmesi önlenmiş, hava kirliliği, artık doğal gaz kullanıldığı için oldukça azalmıştır.

Roma şehir surları restorasyonları başlatılmış, can damarı Beyoğlu yeni açılan bir cadde ile kurtarılmış, daha önceki yıllara nazaran genel temizlik, bakım, çöp işleri Avrupa standartlarını yakalamıştır. Çevre yolları Boğaziçi'ni 2 asma köprü ile geçerek kıtaları bağlarken, Avrupa yakası hızlı tramvay ve nihayet metro sistemine kavuşmuş, kıyılarda inşa edilen deniz otobüsleri terminalleri ile deniz taşımacılığında sürat ve konfor sağlanmıştır.

Tarihi yarım adadaki bütün sınaî tesisler şehir dışında yapılan modern sitelere taşınırken, yeni şehirler ve uluslararası otobüs terminali de trafik yoğunluğunu rahatlatmıştır.

İSTANBUL'UN İKLİMİ

4 Mevsimi de yaşar İstanbullu. Kısa İlkbahar, ideal Yaz sıcaklığı, uzun, mavi göklü Sonbahar ve ıslak Kış. Boğaziçi Erguvan korularının pembesine bürülüdür İlkbaharlarda. Park ve bahçeler lale ve çiçeklerle bezelidir. Mart serin, yağışlı; Nisan ve Mayıs tam bahar...

Haziran yarı bahar yarı yaz gibidir. Bir deyim "karpuz kabuğunu görmeden denize girme" der. Eylül sonlarına kadar İstanbul'un denizleri yüzmeye elverişlidir. Temmuz ve Ağustos aylarının belki 2-3 haftası sıcaklık artabilir, bu süre dışı, bazen bir kaç gün bulutlu ve serin bile olabilir. Deniz ve karaları böylesi harmanlanmış bir bölgenin havasına tam güven olamaz. Sonbahar en uzun mevsimdir. Aralık ayından Mart'a kadar. Karlı veya dondurucu kış günleri sayılıdır. Serin, kuzey "poyraz" rüzgarı ile yağışlı, ılık güney "Iodos"u yıl boyu hakim rüzgarlardır. Şehir sınırlarında şiddetli son kış 1978 yılında yaşanmış, hava limanı 3 gün kısmen kapanmıştı. Karlı günlerin özlemine çekenler için Bursa Uludağ her türlü kış sporları için yakındadır.



Kız Kulesi



Sultanahmet Camisi

YAPMADAN DÖNME ...

- İstanbul'un dini mimari şaheserlerinden Süleymaniye Camiini ve Sultanahmet Camiini görmeden,
- Ayasofya ve Kariye Müzesi'ni ziyaret etmeden,
- Topkapı Sarayı, Dolmabahçe Sarayı ve Rumeli Hisarını gezmeden,
- Boğaz'da ve adalarda vapur gezisi yapmadan,
- Galata Kulesinden ve Pierre Loti'de İstanbul manzarası seyretmeden,
- Sanat ve kültür etkinliklerini izlemeden,
- Eğlence hayatını merak edip, görmeden,
- Ortaköy pazarına uğramadan,
- Büyükdada fayton turu yapmadan,
- Boğazda, Kumkapıda, ÇiçekPasajında balık, Kanlıcada yoğurt, Beyoğlunda profiterol yemeden,
- Kapalıçarşı'da halı, mücevherat, deri giyim eşyaları, Mısır Çarşısında lokum, baklava, pastırma, şekerleme almadan
- Beyoğlunda ve tüm mega alışveriş merkezlerinde alışveriş yapmadan dönmeyin.



KISA SÜRECEK BİR İSTANBUL ZİYARETİNDE ...

Bu güzel şehri ziyaret için çok kısa bir süreniz mi var? Endişelenmeyin bu kısa sürede dahi "İstanbul'u yaşamak" için alternatifleriniz mevcut.

Sürekli düzenlenen günlük turlarla, önemli tarihi yerleri, müzeleri, meşhur Kapalı çarşı ve civarını gezebilirsiniz. Oteller veya limandan hareket eden turlar tarihi İstanbul yarımadasında bulunan şaheserleri yarımşar günlük programlar ile size tanıtır. En azından Ayasofya Müzesi, Süleymaniye Camii, Sultan Ahmet Camii, Hipodrom ve Topkapı Sarayı Müzesi gibi şaheserleri gezme şansınız olur. Pek çok Roma, Bizans ve Türk eserlerini tanıyabileceğiniz Boğaziçi ve Asya yakası turlarına da katılmanız mümkündür. Bu turlar sonrasında unutamayacağınız güzellikler ve anılarla ülkenize dönersiniz.



Ortaköy Camisi

Roma devri şehir surları, son Bizans devri fresk ve mozaikleri ile süslü, ünlü Kariye Müzesi, şehrin en güzel manzarasının görülebileceği Galata Kulesi, Boğaziçi kıyısındaki dünyanın en zengin sarayı Dolmabahçe, ünlü Arkeoloji Müzeleri, Türk İslam Sanatları müzesi, Mısır Çarşısı ve diğer bir çok tarihi eseri 3-4 günlük bir ziyaretle gezip tanıyabilirsiniz.

Ve Boğaz turları... Boğaz'da bir vapur gezisi, unutulmaz anılarınız arasında girecektir. Boğaz'ın iki yakasında sıralanan her birinden ayrı bir sevdâ masalının sulara yansıdığı asude ve emsalsiz yalılar, 20. yüzyılda yapılan lüks villalar, Dolmabahçe, Göksoy ve Beylerbeyi Sarayları, Rumeli ve Anadolu Hisarları, balıkçı köylerinden kalma izler, lokantalar, çay bahçeleri, parklar, gece kulüpleri sizi büyüleyebilir. Aynı günde Karadeniz'in vahşi sahillerinde denize girip ardından Marmara'nın sakin kıyılarında bir çay bahçesinde bir fincan kahvenizi yudumlar ve İstanbul Boğazının güzelliğini doya doya seyredersiniz.

İstanbul tarihsel yapıların yenileriyle buluştuğu bir şehirdir. İstanbul'da alış veriş imkanları zengin ve çeşitlidir. Kapalı Çarşı ve girişteki büyük meşhur mağazalar, Ak Merkez, Galeria, Capitol ve benzeri merkezler, Beyoğlu, Nişantaşı butikleri, Bağdat caddesinin mağazaları yıl boyu hizmet verirler.

Kapalıçarşı labirentvari yapısıyla geçmişin hülyalı günlerinin izlerini taşımakta ısrar ederken bir yandan da modern dünyanın yepyeni ürünlerini serer önünüze; büyüleyici mücevherler, bakır eşyalar, halılar, çeşit çeşit deri ve süet giyim... Cazibesine kapılınca en ufak bir yorgunluk duymadan saatlerce dolaşabilirsiniz bu çarşıda.



Mısır Çarşısı



Ayasofya Müzesi

Pek çok medeniyete ev sahipliği yapan güzel İstanbul'dan size sevgiler gönderiyoruz.

ULAŞIM

Kent Dışı Ulaşım

Karayolu ile ulaşımında kullanılan Büyük İstanbul Otogarı, 1980'li yıllarda Topkapı'da bulunan İstanbul Trakya Otogarı'nın yetersiz gelmesi üzerine, 1987'de yapımına başlanmış, 1994 yılında hizmete girmiştir.

Kente demiryolu ile ulaşım için kullanılan Haydarpaşa Garı, 1908'de İstanbul - Bağdat Demiryolu hattının başlangıç istasyonu olarak inşa edilmiştir. Gar, TCDD'nin ana istasyonudur. İstanbul'un Anadolu Yakası'nda Kadıköy'de bulunur. Osmanlı İmparatorluğunun son dönemlerinde bu istasyondan Bağdat Demiryolu yanında Hicaz Demiryolu seferleri de yapılmaya başlanmıştır. Şehrin Avrupa yakasında Eminönü'nde bulunan Sirkeci Garı Trakya ve Avrupa'ya demiryolu ulaşımının başlangıcıdır.

Kente havayolu ile ulaşım için Atatürk Havalimanı ile Sabiha Gökçen Havalimanları mevcuttur. 3. Havalimanının da yapılması gündemdedir.

Kentin Türkiye'deki önemli merkezlere uzaklığı şöyledir: Kayseri 770 Adana 939, Hatay 1171, Ankara 454, Antalya 724, Bursa 243, Edirne 227, Diyarbakır 1372, Gaziantep 1136, İzmir 565, Konya 663, Kayseri 770, Samsun 733, Trabzon 1067 km.

Kent İçi Ulaşım

İlde kent içi ulaşımında kullanılmak üzere İETT ve Ulaşım AŞ tarafından işletilen metro, tramvay, metrobüs otobüslerin yanında dolmuş ve İDO tarafından işletilen deniz otobüsleri ve feribotlar da kullanılmaktadır. Kentte 13 adet raylı sistem hattı vardır ve bu hatların uzatılması ve yenilerinin yapılması projeleri vardır. Kentte ayrıca 1510 m uzunluğundaki Fatih Sultan Mehmet ve 1071 m uzunluğundaki Boğaziçi Köprüsü ile Avrupa Yakası ile Asya Yakası arasındaki ulaşım sağlanır. 3. Köprü'nün ihalesi yapılmıştır.

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ABSTRACTS / ÖZETLER

A Study on Spinel Formation and Sintering Behavior of Al₂O₃-MgO System for Induction Furnace Linings

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Alumina (Al₂O₃) is the most fashionable material for producing neutral linings of induction furnaces used in steel industry. This type of lining has very high melting temperature, high strength, high hardness, and relatively high resistance to slag attack. In induction furnace applications chemical durability, thermal shock resistance, and mechanical strength of Al₂O₃ based neutral linings can be improved by direct addition of pre-reacted spinel (MgAl₂O₄), or by adding fine MgO to form an in situ spinel phase. When using in situ spinel forming alumina based neutral linings factors such as control of spinel formation kinetics, distribution of the spinel phase in the microstructure, and sintering kinetics in the Al₂O₃-MgO system are critical issues. Accordingly, the objective of this research was to study the spinel MgAl₂O₄ formation behavior and the sintering of alumina based Al₂O₃-MgO type induction furnace ramming materials in terms of the controllable variables like particle size distribution in the ramming mix, sintering temperature, and sintering time.

Investigation of the Influences of SnO₂ Incorporation on the Mechanical and Thermal Shock Behaviours of MgO-Spinel Composite Refractories

Cemal Aksel, Pınar Uğur

Anadolu University. - Türkiye

Mechanical properties and thermal shock behaviour of MgO-spinel composite refractories incorporated with SnO₂ were examined. The relationships between mechanical/thermal shock behaviours and microstructural variations for different compositions were investigated. Mechanical properties of composite refractory materials were measured and evaluated. The addition of varied amounts of SnO₂ to MgO-spinel improved mechanical properties, Rst values and thermal shock data significantly. The fundamental parameters improving the mechanical properties and thermal shock resistance of MgO-Spinel-SnO₂ refractories were in general determined as follows: i) when the microcracks formed in the structure reached to Mg₂SnO₄ particles or pores; crack branching and deviation of interlinked microcracks or crack arresting occurred more effectively than that of spinel particles, ii) the trend of fracture type was converted to intergranular fracture with the addition of spinel and transgranular fracture with the incorporation of SnO₂; furthermore with the incorporation of SnO₂, iii) critical defect size, iv) work of fracture and v) density values increased, and vi) grain size of MgO decreased. Those improvements observed in thermo-mechanical properties confirmed that MgO-Spinel-SnO₂ composite refractories used at high temperatures showed a low strength loss with a high thermal shock damage resistance, accordingly leading to a long service life for those refractories in industrial uses.

Seramik Sağlık Gereçlerinde Tane Boyut Dağılımının Yüzey Özelliklerine Etkisi

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Sır, seramik bünyeyi ince bir tabaka şeklinde kaplayarak, bünyenin üzerinde eriyen camı bir oluşumdur. Kimyasal bileşimi açısından pişirme koşullarına ve bünyenin ısıya bağlı davranışlarına uyum sağlamak ve kullanım esnasındaki koşullarda dayanıklı olmak zorundadır. Seramik sağlık gereçlerinde (SSG), ürün boyutlarının büyük ve karmaşık olması nedeniyle sır yüzeyi kişilerle doğrudan temas halindedir. Kullanılan sırnın beyaz ve opak olması kusurları rahatça göstermektedir, dolayısıyla düzgün bir sır yüzeyi elde etmek oldukça zordur. Bu çalışmada, sır çamurunun tane boyut dağılımı değişiminin sır yüzeyine etkisi incelenmiştir. Çalışmalar farklı kompozisyona sahip olan iki reçete ile gerçekleştirilmiştir. Bu kapsamda, ham numunelerin tane boyut dağılımı ve ısı mikroskobu analizi, pişmiş numunelerin karakterizasyonu için XRD, SEM, spektrofotometre, parlaklık, yüzey pürüzlülük ölçümleri yapılmıştır. Çalışmalar sonucunda, sır süspansiyonunun tane boyut değişimi ile yüzey özelliklerinin değiştiği görülmüştür.

Usage of Boron Wastes in the Commerically Produced and Used ZrCMS System Opaque Frit Composition

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Over the past two decades there was growing interest in the development of frits that are able to crystallise on firing because of the need for improvement in the mechanical and chemical properties of glazed tiles. The ZrO₂-CaO-MgO-SiO₂ (ZrCMS) glass-ceramic system is one of these and exhibits high resistance to abrasion and surface scratches. In this present study, boron wastes of Eti Mine Boron Company, which appear at huge amounts during processes, were characterized and added into the commercially produced and used ZrCMS system opaque frit composition. New compositions were applied on tile bodies, and then fast fired under industrial working conditions. Newly-produced glazes were characterized in terms of optical, mineralogical and microstructural properties.uses.