

List of Publications

<http://orcid.org/0000-0003-4836-3284>

Publications

Peer Reviewed Articles (10 most important in bold)

24. *Dual self-organised shear banding behaviours and enhanced ductility in phase separating Zr-based bulk metallic glasses*, Zhang, Z. Q., Song, K. K., Sun, B. A., Wang, L., Cui, W. C., Qin, Y. S., Han, X. L., Xue, Q. S., Peng, C. X., Sarac, B., Spieckermann, F., Kaban, I. and Eckert, J., *Philosophical Magazine*, 2018, 98, 1744-1764
23. *Universal scaling Hall-Petch relationship in metallic glass matrix composites*, Yuyang Liu , Peizhi Liu , Jiaojiao Li , Peter Liaw , Florian Spieckermann , Daniel Kiener , Jürgen Eckert, Jun Wei Qiao, *International Journal of Plasticity*, 105, 225-23
22. *Microstructures, martensitic transformation, and mechanical behavior of rapidly solidified ti-ni-hf and ti-ni-si shape memory alloys*. X. L. Han, K. K. Song, L. M. Zhang, H. Xing, B. Sarac, F. Spieckermann, T. Maity, M. Mühlbacher, L. Wang, I. Kaban, and J. Eckert, *Journal of Materials Engineering and Performance*, 27(3):1005–1015, feb 2018.
21. *Rapid and partial crystallization to design ductile CuZr-based bulk metallic glass composites*, Song, K., Han, X., Pauly, S., Qin, Y., Kosiba, K., Peng, C., Gong, J., Chen, P., Wang, L., Sarac, B., Ketov, S., Mühlbacher, M., Spieckermann, F., Kaban, I. and Eckert, J. *Materials and Design*, 2018, 139, 132-140
20. ***Structural modifications in sub-T_g annealed CuZr-based metallic glass***, Sarac, B., Bernasconi, A., Wright, J., Stoica, M., Spieckermann, F., Mühlbacher, M., Keckes, J., Bian, X., Wang, G. and Eckert, J. *Materials Science and Engineering A*, 2017, 707, 245-252.
19. ***Dislocation movement induced by molecular relaxations in isotactic polypropylene***, F. Spieckermann, G. Polt, H. Wilhelm, M. Kerber, E. Schafner, M. Reinecker, V. Soprunyuk, S. Bernstorff and M.J. Zehetbauer, *Macromolecules*, 2017, 50, 6362-6368, doi:10.1021/acs.macromol.7b00931 .
18. *Atomic origin for rejuvenation of a Zr-based metallic glass at cryogenic temperature*, XL Bian, G Wang, J Yi, YD Jia, J Bednarčík, QJ Zhai, I Kaban, B Sarac, M Mühlbacher, F Spieckermann, J Keckes, J Eckert, *Journal of Alloys and Compounds* (2017) 718, 254-259.
17. *Stability of shear banding process in bulk metallic glasses and composites*, Y Qin, X Han, K Song, L Wang, Y Cheng, Z Zhang, Q Xue, N Sun, J Wang, B. Sun, B. Sarac, F. Spieckermann, G. Wang, I. Kaban, J. Eckert, *Journal of Materials Research* (2017) 32 (13), 2560-2569.
16. ***Micropatterning kinetics of different glass-forming systems investigated by thermoplastic net-shaping***, Sarac, B., Bera, S., Spieckermann, F., Balakin, S., Stoica, M., Calin, M., Eckert, J., *Scripta Materialia*, Pergamon, 2017. doi: 10.1016/j.scriptamat.2017.02.038.

15. ***In Situ X-Ray Synchrotron Profile Analysis During High Pressure Torsion of Ti***, Schafler, E., Kerber, M. B., Spieckermann, F., Fischer, T., Schuster, R., von Baeckmann, C., *Magnesium Technology 2017*, Springer International Publishing, (2017) 645-651. doi: 10.1007/978-3-319-52392-7_89.
14. *Hysteresis and Loss Measurements on the Plastically Deformed Fe-(3 wtSi Under Sinusoidal and Triangular External Field*, SR. Sato Turtelli, S. Hartl, R. Grössinger, R. Wöhrenschiemmel, D. Horwatitsch, F. Spieckermann, G. Polt, M. Zehetbauer, *IEEE Transactions on Magnetics*, IEEE, (2016) 52, 6301007, doi: 10.1109/TMAG.2016.2530683.
13. ***Crystalline plasticity in isotactic polypropylene below and above the glass transition temperature***, Gerald Polt, Florian Spieckermann, Harald Wilhelm, Christopher Fischer, Erhard Schafler, Sigrid Bernstorff, Michael Zehetbauer, *Express Polymer Letters*, (2015) 9 (10), doi: 10.3144/expresspolymlett.2015.81.
12. *Plastic deformation by dislocations in high density polyethylene by high-resolution nanoindentation creep experiments*, Mohammad Zareghomsheh, Florian Spieckermann, Gerald Polt, Harald Wilhelm, Michael Zehetbauer, *Polymer International*, (2015), 64 (11), 1537-1543, doi: 10.1002/pi.4967.
11. ***Rate mechanism and dislocation generation in polyethylene and other semicrystalline polymers***, F. Spieckermann, H. Wilhelm, G. Polt, S. Ahzi and M.J. Zehetbauer, *Polymer*, (2014), 55, 1217–1222, doi: 10.1016/j.polymer.2014.01.020.
10. ***The role of dislocations in γ -i-PP under plastic deformation investigated by X-ray line profile analysis***. Polt, G., Spieckermann, F., Wilhelm, H., Kerber, M., Schafler, E., Bernstorff, S., and Zehetbauer, M., *Mechanics of Materials*, (2013), 67, 126–132, doi:10.1016/j.mechmat.2013.05.010.
9. *X-ray diffraction study of iPP and iPP/TiO₂ composites relating to micromechanical properties*, Cagliaio, M., Calleja, F., Spieckermann, F., Scholtyssek, S., Mina, M. and Bhuiyan, M. *Journal of Applied Polymer Science*, 2012, 124, 3147-3153, doi:10.1002/app.34716 .
8. ***The role of dislocations for the plastic deformation of semicrystalline polymers as investigated by multi-reflection X-ray line profile analysis***, F. Spieckermann, G. Polt, H. Wilhelm, M. Kerber, E. Schafler, and M.J. Zehetbauer, *Journal of Applied Polymer Science*, 2012, 125, 4150-4154, doi:10.1002/app.36570.
7. ***X-ray line profile analysis an ideal tool to quantify structural parameters of nanomaterials*** , Michael B. Kerber, Michael J. Zehetbauer, Erhard Schafler, Florian C. Spieckermann, Sigrid Bernstorff and Tamas Ungar, *JOM*, 2011, 63, 61-69+84, doi:10.1007/s11837-011-0115-1.
6. ***“Nano”-effects in your coffee maker?***, F. Spieckermann, *Atomium Culture*, (2010), URL:http://atomiumculture.eu/content/“Nano”-effects-your-coffee-maker-0.
5. ***Determination of lamella thickness distributions in isotactic polypropylene by X-ray line profile analysis***, F. Spieckermann, H. Wilhelm, M. Kerber, E. Schafler, S. Bernstorff and M.J. Zehetbauer, *Polymer*, (2010), 51, 4195-4199, doi:10.1016/j.polymer.2010.07.009.

4. *Plasticity and X-ray line profile analysis of poly(3-hydroxybutyrate)*, F. Spieckermann, H. Wilhelm, M. Kerber, E. Schafler, S. Bernstorff and M.J. Zehetbauer, *Journal of Physics: Conference Series*, 15th International Conference on the Strength of Materials (ICSMA 15), (2010), 240, 012146, doi:10.1088/1742-6596/240/1/012146.
3. ***Mechanical properties of filled antimonide skutterudites***, L. Zhang, G. Rogl, A. Grytsiv, S. Puchegger, J. Koppensteiner, F. Spieckermann, H. Kabelka, M. Reinecker, P. Rogl, W. Schranz, M. Zehetbauer, M.A. Carpenter, *Materials Science and Engineering B*, (2010), 170, 26-31, doi:10.1016/j.mseb.2010.02.022.
2. *Determination of critical strains in isotactic polypropylene by cyclic loading - unloading*, F. Spieckermann, H. Wilhelm, E. Schafler, E.C. Aifantis and M.J. Zehetbauer, *Journal of Engineering Materials and Technology*, (2009), 131, 011109-5, doi:10.1115/1.3030938 .
1. *Application of composite models to isotactic polypropylene for the determination of phase specific stress-strain curves*, F. Spieckermann, H. Wilhelm, E. Schafler, S. Ahzi and M. Zehetbauer, *Materials Science and Engineering A*, (2008), 483-484, 76-78, doi:10.1016/j.msea.2006.10.180.

Manuscripts in Preparation

6. *High pressure torsion-induced shear banding in eutectic high entropy alloys*, T. Maity, Prashanth Konda Gokuldoss, A Janda, J. T. Kim, N. Chawake, F. Spieckermann, Z. Wang, J. Eckert, submitted.
5. *Structure modifications upon annealing-assisted high-pressure torsion in Zr-based bulk metallic glasses*, B. Sarac, F. Spieckermann, A. Rezvan, C. Gammer, J. Keckes, J. Eckert, submitted
4. *Novel creep test method for characterisation of strain bursts in semicrystalline polymers*, H. Wilhelm, F. Spieckermann, Ch. Fischer, G. Polt, M. Zehetbauer, submitted
3. *Fast and direct determination of fragility in metallic glasses using chip calorimetry*, Florian Spieckermann, Innozenz Steffny, Xilei Bian, Sergey Ketov, Mihai Stoica, Jörg E. Löffler, Jürgen Eckert, submitted.
2. *Plastic deformation by dislocations in high density polyethylene by high-resolution nanoindentation creep experiments*, Mohammad Zare Ghomsheh, Florian Spieckermann, Gerald Polt, Harald Wilhelm, Johanna Akbarzadeh Moghadam, Michael Zehetbauer, in preparation
1. *Experimental identification of dislocation types in isotactic polypropylene*, F. Spieckermann H. Wilhelm, M. Kerber E. Schafler.S. Bernstorff M. Zehetbauer, in preparation

Other Publications

14. *In Focus - 6th International Conference on Polymer Behavior (ICPB6)*, M Zehetbauer, F Spieckermann, *Polymer International*, (2015) 64 (11), 1505-1505.

13. *Dislocations induced jerky creep by high-resolution nanoindentation in high density polyethylene*, M. Zareghomsheh, F. Spieckermann, G. Polt, H. Wilhelm, M. Zehetbauer Proceedings of the 16th International Conference on Deformation, Yield and Fracture of Polymers, Kerkrade Netherlands 2015.
12. *In-situ thermal treatment of ultrafine-grained metals produced by severe plastic deformation*, E. Schafler, F. Spieckermann, R. Schuster, B. Joni, HASYLAB Annual Report 2013.
11. *In situ study of microstrains during post yield deformation of polyethylene*, G. Polt, M. Zareghomsheh, F. Spieckermann, H. Wilhelm, S. Bernstorff, M. Zehetbauer, , Annual Report of the Austrian SAXS Beamline at Elettra 2013, Trieste.
10. *The impact of the amorphous phase on the deformation induced formation of dislocations in iPP*, F. Spieckermann , G. Polt , H. Wilhelm, E. Schafler, C.Fischer , M.J.Zehetbauer, S. Bernstorff, ', Annual Report of the Austrian SAXS Beamline at Elettra 2012, Trieste.
9. *Effects of dislocations in γ -phase polypropylene and comparison with other semicrystalline polymers*, G. Polt, F. Spieckermann, H. Wilhelm, M. Kerber, E. Schafler, M.J. Zehetbauer, Proceedings of the 15th International Conference on Deformation, Yield and Fracture of Polymers, Kerkrade Netherlands (2012).
8. *Structure of alkali metals in nanoporous confinement*, A. Ghaffar, W. Pichl, G. Krexner, F. Spieckermann and S. Bernstorff, Annual Report of the Austrian SAXS Beamline at Elettra 2011, Trieste.
7. *Thermal stability of dislocations in semicrystalline polymers*, G. Polt, F. Spieckermann, H. Wilhelm, E. Schafler, S. Bernstorff and M. Zehetbauer, Annual Report of the Austrian SAXS Beamline at Elettra 2011, Trieste.
6. *Existence and kinetics of dislocation generation in gamma phase isotactic polypropylene (gamma-iPP) by in-situ WAXS and SAXS investigation*, G. Polt, F. Spieckermann, H. Wilhelm, M. Kerber, E. Schafler, M.J. Zehetbauer and S. Bernstorff. Annual Report of the Austrian SAXS Beamline at Elettra 2010, Trieste.
5. *Investigation of deformation induced changes of the microstructure of semicrystalline polymers and their Impact on Mechanical Properties*, Spieckermann F., Dissertation supervised by Ao. Univ. Prof. Dr. M. Zehetbauer, University of Vienna, Austria.
4. *SAXS and WAXS studies of PPIPS nanolayered films: influence of confinement and annealing effects*, F.J. Balta-Calleja, E. Cagiao, S. Scholtyssek, F. Spieckermann, G.H. Michler, S.S. Funari, A. Hiltner, E. Baer, HASYLAB Annual Report 2009.
3. *Effects of releasing the hydrostatic pressure on the nanostructure after severe plastic deformation of Cu*, E. Schafler, R. Schuster, M.B. Kerber, F. Spieckermann M. Zehetbauer and S. Bernstorff. Annual Report of the Austrian SAXS Beamline at Elettra 2009, Trieste.
2. *Investigation of the existence and of the kinetics of dislocation generation in biodegradable semicrystalline poly(3-hydroxybutyrate) (PHB) by in-situ WAXS deformation*, F. Spieckermann, H. Wilhelm, E. Schafler, M. Kerber, E. Schafler, S. Bernstorff and M.J. Zehetbauer, Annual Report of the Austrian SAXS Beamline at Elettra 2008, Trieste.

1. *Untersuchung der mechanischen Eigenschaften und Anwendung von Verbundmodellen zur Bestimmung phasenspezifischer Spannungs - Dehnungs - Kurven an isotaktischem Polypropylen*, F. Speckermann, Diploma thesis supervised by Ao. Univ. Prof. Dr. M. Zehetbauer, Nanocrystalline Materials Group, Institute of Materials Physics, University of Vienna, March 2006.

Talks and Conference Contributions

- 07 /2018 *How high pressure torsion affects the relaxation of bulk metallic glasses*, Florian Spieckermann, Baran Sarac, Niraj Chawake, Sergey Ketov, Erhard Schafler, Michael Kerber, Bednarcik Jozef, Torben Fischer, Ivan Kaban, Juergen Eckert, Thermec 2018, Paris, France, **invited oral**.
- 07 /2018 *Microstructural evolution in CoCrNi processed by high pressure torsion* Niraj Chawake, Florian Spieckermann, K. G. Prashanth, Pradipta Ghosh, Tapabrata Maity, Sergey Ketov, Jurgen Eckert, Thermec 2018, Paris, France.
- 06 /2018 *Confined glass transition in amorphous/amorphous metallic nanolayers*, F. Spieckermann, M. Mühlbacher, T. Schöberl, C. Gammer, C. Mitterer, D. Söpu, and J. Eckert, ISMANAM 2018, Rome, Italy.
- 06 /2018 *Fast Calorimetry of $Mg_{65}Cu_{25}Gd_{10}$* , F. Spieckermann et al. , 15th Lähnwitz Seminar 2018, poster, Rostock, Germany.
- 09 /2017 *Amorphous/Amorphous Metallic Multilayers*, F. Spieckermann et al. , Euromat 2017, oral, Thessaloniki, Greece.
- 09 /2017 *Deformation mechanisms of melt-crystallised polymers studied by in-situ X-ray line profile analysis and high resolution creep experiments*, F. Spieckermann et al., Euromat 2017, oral, Thessaloniki, Greece.
- 09 /2017 *Dislocations and molecular relaxations in i-PP*, F. Spieckermann et al., Danube Vltava Sava Polymer Meeting DVSPM 2017, oral, Vienna, Austria.
- 06 /2017 *Micropatterning Kinetics of Zr- and Ti-based BMGs Investigated by Thermoplastic Net-Shaping* Baran Sarac (presenting author), Supriya Bera , Mariana Calin, Spieckermann, F., Mihai Stoica, Eckert, J. 22 Jun 2017, ISMANAM, San Sebastian, Spain
- 04 /2017 *Crystalline/Amorphous Metallic Multilayers – from Dislocations to Shear Bands* Mühlbacher, M. (presenting author), Christoph Gammer , Spieckermann, F. , Mitterer, C. , Eckert, J. , 27 Apr 2017, ICMCTE, San Diego, USA
- 03 /2017 *In-situ synchrotron experiments as a tool to probe defect mediated plasticity in nanostructured materials*, F. Spieckermann, International Conference on Advances in Metallurgy, Materials and Manufacturing (ICAMMM-2017), Salem India, **invited oral**.
- 09 /2016 *Dislocation movement induced by molecular relaxations in isotactic polypropylene*, Spieckermann F., Polt G., Wilhelm H., Kerber M., Schafler E., Reinecker M., Soprnyuk V., Bernstorff S., Zehetbauer M., Future Possible Use of Neutron and Synchrotron Sources by the Austrian User Community, poster, Graz, Austria.
- 09 /2016 *Dislocation movement induced by molecular relaxations in isotactic polypropylene*, Spieckermann F., Polt G., Wilhelm H., Kerber M., Schafler E., Reinecker M., Soprnyuk V., Bernstorff S., Zehetbauer M., Future Possible Use of Neutron and Synchrotron Sources by the Austrian User Community, poster, Graz, Austria.

- 09 /2016 *Investigation of deformation induced defects in gamma phase polypropylene*, Polt G., Spieckermann F., Wilhelm H., Kerber M., Schafler E., Bernstorff S., Zehetbauer M., Future Possible Use of Neutron and Synchrotron Sources by the Austrian User Community, poster, Graz, Austria.
- 06 /2016 *Defect analysis in semicrystalline polymers using combined differential scanning calorimetry and X-ray line profile analysis*, Spieckermann F. et al., 14th Lahnwitz Seminar 2016, poster, Rostock, Germany.
- 08 /2015 *A novel creep test for characterization of strain bursts in semicrystalline polymers*, Wilhelm H. et al., 17th International Conference on the Strength of Materials (ICSMA 17), **invited oral**, Brno, Czech Republic.
- 08 /2015 *Thermal stability of deformation induced dislocations in polypropylene*, Polt G., Spieckermann F., Wilhelm H., Kerber M., Schafler E., Bernstorff S., Zehetbauer M., 17th International Conference on the Strength of Materials (ICSMA 17), oral, Brno, Czech Republic.
- 08 /2015 *Investigation of dislocation jumps in polyethylene by high-resolution nanoindentation creep*, Zare Ghomsheh M., Spieckermann F., Polt G., Wilhelm H., Zehetbauer M., 17th International Conference on the Strength of Materials (ICSMA 17), oral, Brno, Czech Republic.
- 08 /2015 *In-situ synchrotron diffraction of thermal treatment of ultrafine-grained metals produced by severe plastic deformation*, Schafler E., Spieckermann F., Schuster R., Joni B., Schell N., 17th International Conference on the Strength of Materials (ICSMA 17), **invited oral**, Brno, Czech Republic.
- 08 /2015 *Rate mechanism and dislocation generation in polyethylene and other semicrystalline polymers*, Zehetbauer M., Wilhelm H., Polt G., Ahzi S., Spieckermann F., 17th International Conference on the Strength of Materials (ICSMA 17), oral, Brno, Czech Republic.
- 03/2015 *Dislocation Contrast Factor of Semicrystalline Polymers*, F. Spieckermann, G. Polt, H. Wilhelm, E. Schafler, S. Bernstorff, M. Kerber, M. Zehetbauer, 16th International Conference on Deformation, Yield and Fracture of Polymers, poster, Kerkrade Netherlands.
- 03/2015 *Dislocation induced jerky creep by high-resolution nanoindentation in high density polyethylene*, M. Zareghomsheh, F. Spieckermann, G. Polt, H. Wilhelm, M. Zehetbauer, 16th International Conference on Deformation, Yield and Fracture of Polymers, poster, Kerkrade Netherlands.
- 01/2015 *The role of dislocations for jerky creep of semicrystalline polymers*, Energy Materials Nanotechnology Meeting (ENM), **F. Spieckermann et al. invited oral**, Orlando Florida, USA.
- 09/2014 *Rate mechanism and dislocation generation in high density polyethylene and other semicrystalline polymers*, International Conference on Polymer Behaviour ICPB 6, Zehetbauer et al. (co-author F.S.), oral, Vienna, Austria

- 09/2014 *Novel creep test method for characterisation of strain bursts in semicrystalline polymers*, International Conference on Polymer Behaviour ICPB 6, Harald Wilhelm et al. (co-author F.S.), oral, Vienna, Austria
- 09/2014 *Thermal Stability of Deformation Induced Dislocations in PP*, International Conference on Polymer Behaviour ICPB 6, Gerald Polt et al. (co-author F.S.), oral, Vienna, Austria
- 09/2014 *Dislocation generation in polymer crystals on the molecular scale*, International Conference on Polymer Behaviour ICPB 6, oral, Vienna, Austria
- 09/2014 *Plastic deformation by dislocations in HDPE by high-resolution nanoindentation creep experiments*, International Conference on Polymer Behaviour ICPB 6, Mohammad Zareghomsheh et al. (co-author F.S.), poster, Vienna, Austria
- 09/2014 *High-pressure crystallization in various semicrystalline polymers and compounds*, International Conference on Polymer Behaviour ICPB 6, Cornelia von Bäckmann et al. (co-author F.S.), poster, Vienna, Austria
- 09/2014 *Zeitaufgelöste Beobachtung des Kristallwachstums von Polymeren*, Deutsche Tagung für Forschung mit Synchrotronstrahlung, Neutronen und Ionenstrahlen an Großgeräten SNI 2014, Linda Grodd et al. (co-author F.S.), poster, Bonn, Germany
- 07/2014 *Formation of shish-kebab structures of polyethylene induced by depositing dilute solutions on solid substrates*, poster, 4th SoMaS School: soft matter under external constraints, Mittelwihr, France
- 03/2014 *Study of SPD induced lattice defects and their effects to strength before and during annealing*, 2014 TMS Annual Meeting & Exhibition, Symposium: Neutron and X-Ray Studies of Advanced Materials VI, Michael Zehetbauer et al. (co-author F.S.), **invited oral**, Orlando, Florida, US.
- 01/2014 *The thermal stability of dislocations in α -phase polypropylene*, Workshop on Recent Advances in Polymer Crystallization, poster, Tsinghua University Beijing, China.
- 09/2013 *Rate mechanism and dislocation generation in polyethylene*, Advances in Polymer Science and Technology (APST) 3, oral, Linz, Austria
- 09/2013 *The thermal stability of dislocations in α - phase polypropylene*, Advances in Polymer Science and Technology (APST) 3, G. Polt et al. (co-author F.S.), oral, Linz, Austria
- 03/2013 *Characterisation of deformation induced microstructures by in-situ X-ray synchrotron Bragg profile analysis*, 2013 TMS Annual Meeting & Exhibition, Symposium: Neutron and X-Ray Studies of Advanced Materials VI, E. Schafler et al. (F.S. co-author), **invited oral**, Orlando, Florida, US.
- 03/2013 *Investigating the thermal stability of dislocations in semicrystalline polymers using synchrotron radiation*, 8th European NESY Winter-School & Symposium on Neutrons and Synchrotron Radiation, G. Polt et al. (co-author F.S.), poster, Planneralp, Austria.

- 09/2012 *Modified Williamson Hall analysis - a powerful method for the determination of microstructural parameters of semi-crystalline polymers*, H. Wilhelm et al. (co-author F.S.), ICPB 5 - International Conference on Polymer Behaviour, **invited oral**, Aveiro, Portugal.
- 09/2012 *Rate mechanism and dislocation generation in semicrystalline polymers*, ICPB 5 - International Conference on Polymer Behaviour, oral, Aveiro, Portugal.
- 09/2012 *Dislocation kinetics in plastically deformed alpha and gamma polypropylene*, G. Polt et al. (co-author F.S.), ICPB 5 - International Conference on Polymer Behaviour, oral, Aveiro, Portugal.
- 08/2012 *The role and nature of dislocations in plastic deformation of semicrystalline polypropylene*, ICSMA 16 - International Conference on the Strength of Materials, (first author F.S., presenting author G. Polt), oral, Bangalore, India.
- 08/2012 *Plastic deformation and thermal stability of polyethylene terephthalate (PET)*, ICSMA 16 - International Conference on the Strength of Materials, G. Polt et al. (co-author F.S.), poster, Bangalore, India.
- 04/2012 *Plastic deformation and thermal stability of polyethylene terephthalate (PET)*, 15th International Conference on Deformation, Yield and Fracture of Polymers, G. Polt et al. (co-author F.S.), poster, Kerkrade, Netherlands.
- 03/2012 *Multiple Whole X-Ray Line Profile Analyses for investigating the role and nature of dislocations in plastic deformation of semicrystalline polymers*, 2012 TMS Annual Meeting & Exhibition, Symposium in Honor of Prof. G. Kostorz: Neutron and X-Ray Studies of Advanced Materials V, Michael Zehetbauer et al (F.S. co-author), **invited oral**, Orlando, Florida, US
- 12/2011 *Crystalline defects in nanostructured bio- and synthetic polymers studied by X-ray line profile analysis*, 4th International Conference on the Mechanics of Biomaterials and Tissues, Waikaloa, Hawai'i, USA.
- 09/2011 *The role and nature of dislocations in plastic deformation of semicrystalline polypropylene*, EMRS fall Meeting 2011, Krakow, Poland.
- 09/2011 *The role and nature of dislocations in plastic deformation of semicrystalline polypropylene*, G. Polt (co-author F.S.), EMRS fall Meeting 2011, Krakow, Poland.
- 09/2010 *Determination of lamella thickness distributions in isotactic polypropylene by X-ray line profile analysis*, ICPB 4 - International Conference on Polymer Behaviour, oral, Lodz, Poland.
- 09/2010 *The role of dislocations for the plastic deformation of semicrystalline polymers as investigated by multi-reflection X-ray line profile analysis*, ICPB 4 - International Conference on Polymer Behaviour, M. Zehetbauer et al. (co-author F.S.), oral, Lodz, Poland.
- 09/2010 *Mechanism of plasticity in gamma-polypropylene*, ICPB 4 - International Conference on Polymer Behaviour, G. Polt et al. (co-author F.S.), oral, Lodz, Poland.

- 08/2009 *Plasticity and X-ray profile analysis of poly(3-hydroxybutyrate)*, ICSMA 15 - International Conference on the Strength of Materials, oral, Dresden, Germany.
- 08/2009 *Mechanical behaviour of glasses and non-crystalline solids*, ICSMA 15 - International Conference on the Strength of Materials, E. Schafner et al. (co- and presenting-author F.S.), poster, Dresden, Germany.
- 08/2009 *Phase-specific mechanisms of plasticity in polymorphic polypropylene*, ICSMA 15 - International Conference on the Strength of Materials, H. Wilhelm et al. (co-author F.S.), oral, Dresden, Germany.
- 11/2008 *On the role of dislocations for the mechanical properties of semicrystalline polymers*, ICPB 3 - International Conference on Polymer Behaviour, oral, Marrakesh, Morocco.
- 10/2008 *Nano-effects of mechanical properties in semicrystalline polymers?*, Nanoplasticity Workshop, poster, Lake Bostal, Germany.
- 09/2008 *In-situ SANS investigation of strained conductive polymer-carbon composites*, Jahrestagung der Österreichischen Physikalischen Gesellschaft, poster, Leoben, Austria.
- 09/2008 *In-situ SANS investigation of strained conductive polymer-carbon composites*, Deutsche Neutronenstreutagung, poster, Garching, Germany.
- 05/2008 *Investigations of dislocations in non-metallic materials*, E. Schafner et al. (co-author F.S.), Int. Honorary Symp. Tamas Ungar, **invited oral**, Budapest, Hungary.
- 09/2007 *Determination of critical strains in isotactic polypropylene by cyclic loading - unloading*, SHEAR07 Symposium, oral, Nancy, France.
- 05/2007 *Investigation of the mechanical properties of isotactic polypropylene by cyclic compression and application of simple rheological composite models*, Final meeting of RTN-DEFINO, oral, Thessaloniki, Greece.
- 10/2006 *Investigation of the mechanical properties of isotactic polypropylene by cyclic compression and comparison to rheological composite models*, EUROMECH Colloquium 487 "Structure Sensitive Mechanics of Polymer Materials: Physical and Mechanical Aspects", oral, Strassbourg, France.
- 07/2006 *Composite models for nonlinear stress strain curves in semicrystalline polymers* 19th Panhellenic Conference and Summerschool on Non-linear Science and Complexity, oral, Thessaloniki, Greece.
- 06/2006 *Application of composite models to isotactic polypropylene for the determination of phase specific stress-strain curves* ICSMA 14 - International Conference on the Strength of Materials, oral, Xian, China.
- 07/2004 *Structural and micromechanical alterations of isotactic polypropylene due to compression*, Austrian SPD Meeting, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, oral, Leoben, Austria.