Selected Publications Prof. Stefan Mecking

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20) H. Leicht, I. Göttker-Schnetmann, S. Mecking, V. Bodart, T. Hermant: Process for the manufacture of vinyl chloride-containing copolymers. Priority: November 29, 2012. EP 2738187 B1, issued May 4, 2016 to Solvay SA.

19) F. Stempfle, S. Mecking: Aliphatic Long-Chain Polycondensates. Priority: August 10, 2012. EP 2695901 B1 issued to BASF SE September 14, 2016.

18) D. Quinzler, S. Mecking: Polymers made of Renewable Resources. EP 2528963 B1, issued to BASF SE September 23, 2015. US 9096715 B2, issued August 4, 2015. CN102869698B, issued November 25, 2015.

17) T. H. Steinke, H.-H. Goertz, S. Mecking, D. Quinzler: Production of Polyesters from Renewable Resources. Priority: June 4, 2009. EP 2258743 B1, issued to BASF SE January 28, 2015.

15) C. G. J. Aymonier, F. P. M. Cansell, S. Mecking, S. N. Moisan, V. Martinez: Synthesis of particles in dendritic structures in supercritical fluid environments. FR 2895289 B1 to Centre National de la Recherche Scientifique, issued August 21, 2009. EP 1971454 B1, issued February 16, 2011. US 7932311 B2, issued April 26, 2011.

14) M. M. Chowdhry, X. Sava, M. Haag, J. Wildeson, S. Mecking, L. Kolb: Method for Emulsion Polymerization of Olefins. US Pat. 7417098 B2 issued to BASF AG Aug. 26, 2008.

11) M. M. Chowdhry, M. Schmid, P. Preishuber-Pflügl, X. Sava, H. Weiß, S. Mecking, M. Zuideveld, F. M. Bauers: Method for the production of aqueous polymer dispersions. US Pat. 7566760 B2, issued July 28, 2009 to BASF AG.

10) M. M. Chowdhry, M. Schmid, P. Preishuber-Pflügl, X. Sava, H. Weiss, S. Mecking, F. M. Bauers: Method for Emulsion Polymerization of Olefins. US Pat. 7683145 B2, issued March 23, 2010. EP 1527103 B1, issued January 5, 2011 to BASF AG.

9) M. Schmid, M. M. Chowdhry, M. O. Kristen, S. Mecking, F. M. Bauers: Process for the production of aqueous polymer dispersions. U.S. Pat. 6800699 B2 to BASF, issued: October 5, 2004.

5) M. O. Kristen, L. Manders, S. Mecking, F. M. Bauers, R. Mülhaupt: Method for the Emulsion Polymerization of Olefins. Eur. Pat. 1240215 B1 to BASF AG, issued April 24, 2006. U.S. Pat. 7129292 B1 to BASF AG, issued October 31, 2006.

3) S. Mecking: Catalyst Composition. U.S. Pat. 6262196 B1 to Targor GmbH, issued July 17, 2001. Eur. Pat. 963385 B1 to Basell Polyolefine GmbH, issued June 16, 2004. U.S. Pat. 6384144 B1 to Basell Polypropylen GmbH, issued May 7, 2002.

1) W. Keim, S. Mecking: Palladium phosphine ligand catalyst. Priority: March 26, 1993. U.S. Pat. 5525566 to BP Chemicals Ltd., issued June 11, 1996.

Selected Invited Lectures *(since 2010)*

184) Closed Loop Recyclable and Degradable Polyethylene-Like Materials Enabled by Catalysis.
End-of-Life of Plastics Discussion Meeting, IIT Bombay, December 15, 2023.

183) Closed Loop Recyclable and Degradable Polyethylene-Like Materials Enabled by Catalysis.
Dr. R. A. Mashelkar Endowment Lecture, NCL Pune, December 14, 2023.

182) Closed Loop Recyclable and Degradable Polyethylene-Like Materials Enabled by Catalysis.
Dr. S. Sivaram Endowment Lecture, 17th International Conference on Polymer Science and Technology SPSI-Macro-2023, Guwahati, India, December 10, 2023.

181) Closed Loop Recyclable and Degradable Polyethylene-Like Materials Enabled by Catalysis.
ACS Fall Meeting, San Francisco, August 15, 2023.

180) Unconventional Polyethylene Microstructures from Functional Group Tolerant Polymerization Catalysis.
ACS Fall Meeting, ACS Award in Polymer Chemistry: Symposium in Honor of Karen I. Winey, San Francisco, August 15, 2023.

179) Organometallic Catalysis Enabling Closed-Loop Recyclable and Non-Persistent Polyolefin-like Materials.
Gordon Research Conference Organometallic Chemistry, Newport, July 11, 2023.

178) Integrated Approaches Comprising Olefin Metathesis to Enable Plant and Microalgae Oil Feedstock Utilization.
International Symposium on Olefin Metathesis (ISOM-XXIV), Bergen, July 6, 2023.

176) Closed Loop Recyclable and Degradable Polyethylene-Like Materials Enabled by Catalysis
Molecular and Supramolecular Mechanisms of Functional Group Tolerant and Aqueous Polymerization Catalysis
Milkovich Lecture Series, University of Akron, April 3 and 4, 2023.

175) Catalysis to Enable Degradable Polyolefins.
Netherlands Catalysis and Chemistry Conference, Noordwijkerhout, March 6, 2023.

169) Catalytic Routes to Polyethylene-like Polymers from Plant Oils for Closed Loop Recycling and Degradability.
Virgina Tech Solvay Seminar, September 29, 2021 (held online)

168) Catalytic Routes to Polyethylene-like Polymers from Plant Oils for Closed Loop Recycling and Degradability.
ChemBio Lecture 2021, University of Tokyo, September 28, 2021 (held online).

167) Designing Bio-Sourced Polymers that Enable Recycling
ACS Webinar, July 1, 2021.

165) Catalytic Routes to Main-Chain Functionalized Polyolefins
American Chemical Society Meeting. Macromolecular Chemistry: the Second Century, April 6, 2021 (held online).

162) New Plastics as Illuminated by Polyolefins.
8th Chemical Sciences and Society Summit, London, November 10-13, 2019.

158) Seed and Microalgae Oils as Feedstocks for Monomers and Polymers.
Science to Enable the Circular Economy, Discussion Meeting, Royal Society, London, June 24, 2019.

157) Shape Control in Catalytic Polymer Nanoparticle Synthesis.
University of Birmingham, June 5, 2019.

156) Organometallic Catalysis for Unconventional Feedstocks and Polymer Materials.
Imperial College, London, June 3, 2019.

155) Monomers and Main-Chain Functional Polyethylenes from Catalytic Upgrading of Seed and Microalgae Oils.
59th High Polymer Research Group Meeting, Pott Shrigley, April 29, 2019.

154) Organometallic Catalysis for Unconventional Feedstocks and Polymer Materials.
Organometallics and Main Group Seminar, University of Oxford, March 22, 2019.

150) Shape-Anisotropic Polymer Nanoparticles from Catalytic Synthesis.
Bordeaux Polymer Conference, May 28, 2018

147) Unconventional Polymer Architectures and Nanostructures from Functional Group Tolerant Catalysis.
Dutch Polymer Institute Annual Meeting, Eindhoven, November 8, 2017.

146) Unconventional Polyolefin Architectures and Nanostructures from Functional Group Tolerant Catalysis.
Advances in Polyolefins XI Workshop, Santa Rosa, September 26, 2017.

145) α,ω-Difunctional Polyethylene Telechelics Through Functional Group Tolerant Catalysis.
American Chemical Society Meeting, RSC Lectureship Symposium, San Francisco, April 4, 2017.

142) Catalytic Functionalization of Seed and Algae Oils.
6th EuCheMS Chemistry Congress, Seville, September 14, 2016.

141) Organometallic Free Radical Reactivity in Functional Group Tolerant Polymerization
4th Blue Sky Conference on Olefin Polymerization, Sorrento, June 30, 2016.

138) Aqueous Olefin Polymerization.
American Chemical Society Meeting, Gabor A. Somorjai Award Symposium in Honor of Prof. Maurice Brookhart, Denver, March 23, 2015

136) Sustainable Polymer Materials via Functional Group Tolerant Catalysis.
Talents du CNRS Award Symposium, Rennes, December 15, 2014.

133) To Branch or not to Branch in Functional Group Tolerant Polymerization Catalysis.
19th International Symposium on Homogeneous Catalysis, Ottawa, July 5 to 11, 2014.

132) To Branch or not to Branch in Functional Group Tolerant Polymerization Catalysis.
Applied Chemistry Lecture Series, Changchun Institute of Applied Chemistry of the Chinese Academy of Science, June 9, 2014.

131) Long-Chain Aliphatic Polycondensates to Bridge the Gap Between Semicrystalline Polyethylene and Traditional Polyesters.
6th International Symposium on Polymer Chemistry, Shanghai, June 4 to 7, 2014.

130) From Ideal Polymer Nanocrystals to Hyperbranched Oligomers with Functional Group Tolerant Catalysts.
Inaugural Symposium Prof. Dieter Vogt, University of Edinburgh, May 22, 2014.

125) Novel Feedstocks and Crystalline Structures by Functional Group Tolerant Polymerizaton Catalysis.
DPI Invention Award Session at the European Polymer Federation Meeting, Pisa, June 20, 2013.

123) Long-Chain Aliphatic Polycondensates from Plant Oils.
Joint ACS and RSC Meeting Sustainable Polymers, Safety Harbor, May 21, 2013.

122) Functional Group Tolerant Polymerization Catalysis.
9th Society of Polymer Science of Japan International Polymer Conference, Kobe, December 13, 2012.

121) Mechanistic Aspects of Functional Group Tolerant Polymerization Catalysis.
University of Tokyo, December 10, 2012.

120) Functional Group Tolerant Polymerization Catalysis.
Sumitomo Chemical, Sodegaura-City, December 7, 2012.

119) Functional Group Tolerant Polymerization Catalysis.
Tokyo Institute of Technology, Yokohama, December 6, 2012.

118) Functional Group Tolerant Polymerization Catalysis.
Solvay Campus, Brussels, October 10, 2012.

117) Colloidal Polyethylene Crystals and Polyethylene Mimicks by Late Transition Metal Catalysis.
Chemelot International Polyolefins Symposium, Maastricht, October 7 to 10, 2012.

113) Fluorescent Conjugated Polymer Nanoparticles.
Polymers in Dispersed Media Conference, Lyon, April 18, 2012.

112) Renewables to Chemicals by Functional Group Tolerant Organometallic Catalysis.
Materia, Pasadena, March 30, 2012.

111) Long-Chain Aliphatic α,ω-Difunctional Compunds and Polycondensates from Plant Oils.
American Chemical Society Meeting, Next-Generation Renewable Polymers Symposium, San Diego, March 25 to 29, 2012.

110) Opportunities from Functional Group Tolerant Polymerization Catalysis.
Dutch Polymer Institute, Eindhoven, January 26, 2012.

107) Novel Linear Longchain Difunctional Molecules and Plastics from Plant Oils.
9th European Society for the Science and Technology of Lipids Congress, Rotterdam, September 19, 2011.

104) Functional Group Tolerant Organometallic Polymerization Catalysis.
California Institute of Technology, Pasadena, April 1, 2011.

103) Late Transition Metal Complexes and Novel Polymeric Materials.
University of California, Irvine, March 30, 2011.

102) Conjugated Polymer Nanoparticles.
American Chemical Society Meeting, Creative Polymer Award Symposium, Anaheim, March 29, 2011.

99) Catalytic Insertion Polymerization Tolerant to Functional Groups. King Abdullah University of Science and Technology, Catalysis Center Inauguration, Thuwal, December 7, 2010.

98) Functional group tolerant organometallic catalysis: nanocrystals, conjugated polymer nanoparticles and sustainable polycondensates.
Laboratoire de Chimie et Procédés de Polymérisation (CPE – LCPP), Lyon, November 16, 2010.

97) Catalytic insertion polymerization tolerant to functional groups.
2nd Brazilian Workshop on Olefin Polymerization, Bento Goncalves, November 9, 2010.

96) Functional group tolerant polymerization catalysis. American Chemical Society Meeting, New Catalysis in Polymer Synthesis Symposium, Boston, August 22, 2010.