

CURRICULUM VITAE

Professor Dr.-Ing. Volker Altstädt

Nationality: German

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Current Position

- CEO of Neue Materialien Bayreuth GmbH, Bayreuth (since 2009)
- Full Professor (W3), Chair of Polymer Materials, University of Bayreuth, Bayreuth (since 2000)
- Department head Polymer Engineering of TuTech Innovation GmbH, Hamburg (since 1998)

Main Research Areas

- Polymer foams
- Polymer composites and nanocomposites
- Polymer blends and compatibilization
- Resins systems and flame protection
- Fatigue behavior of polymers
- Fracture mechanic
- Rheology
- Special injection molding techniques

Short Profile

After his university studies in Physics and earning his Ph.D. degree (Dr.-Ing.) to the department of Mechanical Engineering in Kassel (supervisor Prof. Dr.-Ing. Ehrenstein) in 1987, Volker Altstädt worked as group leader in the Department of Polymer Physics under the Polymer Research Division of BASF AG in Ludwigshafen for eight years. Since 1995 he has been a Full Professor for Polymers in Mechanical Engineering and head of the Department of Polymers and Polymer Composites at the Technical University Hamburg-Harburg, Germany. Since October 2000, Volker Altstädt is Full Professor of the Department of Polymer Engineering in the Faculty of Engineering (ING.) at the University of Bayreuth. Furthermore, since 2009 he is CEO of Neue Materialien Bayreuth GmbH, a Bavarian state R&D-institution in the field of materials and processes for polymers, composites and metals.

The research group of Volker Altstädt is dedicated to scientific and industrial oriented research in the area of polymeric materials, establishing a connection between the natural sciences and engineering technology. Emphasis is placed on the interdisciplinary cooperation among the scientists, bringing together the disciplines of chemistry, physics, chemical engineering and mechanical engineering. Research activities of Volker Altstädt's group focus on polymer foams, polymer composites and nanocomposites, polymer blends and compatibilization, resin systems and flame protection, special injection molding techniques, with the primary goal of determining the structure-properties relationships and tailoring polymeric materials for specific requirements.

Education

- 12/1981 M.S. at University of Kassel (Germany), Department of Experimental Physics
- 04/1987 Ph.D. at University of Kassel (German), Department of Mechanical Engineering

Professional Experience

- 03/1982 - 04/1987 Research Scientist, University of Kassel, Department of Mechanical Engineering, Kassel, Germany
- 01/1984 - 04/1985 Research Scientist, Daimler Benz AG, Department for Materials Engineering, Stuttgart, Germany
- 05/1987 - 12/1991 Research Scientist, BASF AG, Polymer Research Division, Department for Polymer Composites, Ludwigshafen, Germany
- 01/1992 - 09/1995 Group Leader, BASF AG, Polymer Research Division, Department for Polymer Physics, Ludwigshafen, Germany
- 04/1992 - 09/1995 Lecturer for “Composite Testing”, University of Kaiserslautern, Institute of Composites
- 10/1995 - 09/2000 Full Professor for “Polymers in Mechanical Engineering” and Director of the Department for Polymers and Polymer Composites, Technical University Hamburg-Harburg, Germany

Professional Membership

- since 2016 Presidential Commission for International Affairs of the University of Bayreuth
- since 2015 Jury member of POLYCHAR Scientific Committee
- since 2014 Co-organizer: 1st International Forum on Ultra-lightweight and High-strength Advanced Engineering Materials and Industrialization, Guangzhou, China
- since 2013 Adjunct Professor at XI’AN Jiaotong University, China
- since 2013 Executive board of the University of Bayreuth Graduate School
- since 2013 Co-organizer „International Business Plan Competition“ of University of Bayreuth, Hong Kong University of Science and Technology, University of Sao Paulo and University of Illinois at Urbana Champaign
- 2013 Organizer “29th International Conference 2013 of the Polymer Processing Society”, Nuremberg, Germany
- since 2012 Elected Member of acatech National Academy of Science and Engineering, Germany
- since 2010 Presidential Commission for Library Affairs of the University of Bayreuth
- since 2009 Direction panel of the DFG Collaborative Research Centre (SFB 840)
- since 2009 International Representative of the Polymer Processing Society
- since 2008 Advisory Board “Journal of Cellular Plastics“
- since 2006 Advisory Board “Cluster New Materials” within the “Alliance Bavaria Innovative”

since 2006	Advisory Board “EPP-Forum e.V. Bayreuth”
since 2005	Executive board of “Elite Study Program Macromolecular Science” at the University of Bayreuth and the “Elite Study Program Advanced Materials and Processes” at the University of Erlangen-Nuremberg
since 2005	Advisory Board Journal “Polymers & Polymer Composites”
since 2005 - 2015	Jury of the “Quadrant Award”
since 2004	WAK Scientific Alliance of Polymer Technology, Germany
since 2004	Member of the Bayreuth Institute of Macromolecular Research
since 2002	Jury member of the “REHAU Award Technology”
since 1988	IUPAC Subcommittee on “Structure and Properties of Commercial Polymers”

Awards and Prizes

JEC Innovation Award 2018 Award in the category Aerospace Process, to Neue Materialien Bayreuth GmbH for joint development of innovative sandwich design for lightweight structures in a research project with nine partner

MATERIALICA Design & Technology Award 2016 SilverAward in the category to Material Neue Materialien Bayreuth GmbH

Automotive Division Award 2013 by the Society of Plastics Engineers (SPE), category “Body Interior“ to Neue Materialien Bayreuth GmbH

FSK Innovation Prize Foams 2013 by the Association for Foamed Plastics and Polyurethanes e.V.

AVK Innovation Prize 2012 by the Reinforced Plastics Industrial Association e. V., first place category “Research & Science“ for the “Characterization of damage mechanisms within fibre reinforced polymers by Acoustic Emission Analysis”

Outstanding Paper Award 2012 by Emerald Literati Network for „High-performance substrate based on a highly filled thermoplastic polymer“

Automotive Division Award 2010 by the Society of Plastics Engineers (SPE), category “Body Interior” to a project consortium

Innovation Prize of Upper Franconia 2007/2008 by Oberfranken Offensiv – Forum Zukunft Oberfranken e.V.

Business-Plan-Competition Northern Bavaria 2006 to the team „HTT circuit board”

Selected Publications

- [1] Apeldorn T., Wolff-Fabris, F., Altstädt, V.: High-performance substrate based on a highly filled thermoplastic polymer. Circuit World, 2011, 37, 4
- [2] Hedicke-Hoechstoeetter, K.; Lim, G. T.; Altstädt, V.: Novel polyamide nanocomposites based on silicate nanotubes of the mineral halloysite. Composites Science and Technology, Volume: 69 Issue: 3-4, 2009, p. 330-334
- [3] Werner P., Verdejo R., Wöllecke F., Altstädt V., Sandler J. K. W., Shaffer M. S. P.: Carbon Nanofibers Allow Foaming of Semicrystalline Poly(ether ether ketone). Advanced Materials, 2005, 17, 2864

- [4] Uribe-Arocha P., Mehler C., Puskas J. E., Altstädt V.: Effect of sample thickness on the mechanical properties of injection-molded polyamide-6 and polyamide-6 clay nanocomposites. *Polymer*, 2003, 44, 2441
- [5] Sandler J., Werner P., Shaffer M. S. P., Demchuk V., Altstädt V., Windle A. H.: Carbon-nanofibre-reinforced poly(ether ether ketone) composites. *Composites Part A - Applied Science and Manufacturing*, 2002, 33, 1033

Selected Patents

- [1] Expanded Polyamide pellets and method for manufacturing molded components using them : Altstädt V., Fathi A., Hill J., Holmes C.E., Keilholz C., Kerling S., Kirupanantham D., Köppl T., Le Huu M.T., Price D.S., Raps D., Robertson C., Smith P., Tarrier J., Wardlaw A., 2015, WO/2016/030333A1
- [2] Blowing Agent for Producing Foams under Microwave Irradiation / Treibmittel zum Herstellen von Schäumen unter Mikrowellenbestrahlung: Luinge H., Altstädt V., Wolff-Fabris F., 2011, WO/2011/023433
- [3] Verfahren zur Herstellung eines faserhaltigen Verbundwerkstoffs: Wolff-Fabris F., Altstädt V., Klophaus K., Ferencz A., 2010, WO/2010/108846
- [4] Phosphoniumsalze als flammhemmende Additive: Döring M., Arnold U., Roth M., Barriau E., Schmidt-Freytag U., Altstädt V., Wolff-Fabris F., 2009, DE102007041988A1
- [5] Zweiphasige Polystyrol/Polyester-Mischungen: Gausepohl H., Oepen S., Wunsch J., Jacob T., Altstädt V., Abetz V., Keiter S., 2000, DE 100 01 070,WO01 51 559