

Curriculum Vitae Carlos Mattea

Name: Dr. Carlos Mattea

Place of Birth: Villa María, Córdoba, Argentina

Date of Birth: January 27th, 1966

Section of Technical Physics II / Polymer Physics, Institute of Physics, TU Ilmenau.
98684 Ilmenau, 03677 693787.

carlos.mattea@tu-ilmenau.de



Education and Professional Background

- 2007-2016 Staff Scientist at Institute of Physics, Ilmenau University of Technology (Technical Physics II/Polymer Physics). Responsible for the Advanced Lab Course (Fortgeschrittenenpraktikum, FP). Radiation Safety Officer (Strahlenschutzbeauftragter).
- 2006-2007 June 1st, 2006 – May 31st, 2007 Postdoctoral fellow in the Department of Biophysical Chemistry at the University of Lund, Lund, Sweden.
- 2001-2006 Research in the Division for Nuclear Magnetic Resonance (Sektion Kernresonanzspektroskopie), University of Ulm, Germany, from November 2001 to May 2006. PhD. thesis defence in 2006.
- 2000-2001 Research fellow at the National University of Córdoba (U.N.C.), Córdoba, Argentina and Lecturer at the Aeronautical University of Córdoba (I.U.A.), Faculty of Engineering, Córdoba, Argentina.
- 1999 Graduation in Physics at the Fa.M.A.F. (Faculty of Mathematics, Astronomy and Physics), National University of Córdoba (U.N.C.), Córdoba, Argentina.

Fellowships, Awards, Projects

Project financed by DAAD (Portugal/Ilmenau). Molecular dynamics of binary electrolyte solutions. (2014-2015)

Best Paper Award 2010 of the IUT in the category "Mathematik und Naturwissenschaften" for the article: S. Ghoshal, C. Mattea, P. Denner, S. Stapf, J. Phys. Chem. B 114, 16356 (2010).

Raymond Andrew Prize Winner 2006, for an outstanding PhD thesis in magnetic resonance. (2006)

Postdoctoral Fellowship by the Wenner-Gren Foundation and the Swedish Research Council at the University of Lund, Sweden, for the period June 1st, 2006 – June 30th, 2007.

Travel grant by GlaxoSmithKline Stiftung (Germany) for the participation to the Gordon Research Conference on Magnetic Resonance, June 2005, Connecticut, USA. (2005)

Visiting scientist in Sektion Kernresonanzspektroskopie (Division for Nuclear Magnetic Resonance) University of Ulm, Germany. May– August 2001.

Fellowship from the National University of Córdoba, Argentina, for university extension activities. (2000)

Fellowship from the National University of Córdoba, Argentina, for university extension activities. (1992)

Relevant Publications

- A. Lozovoi, C. Mattea, A. Herrmann, E. A. Rössler, S. Stapf, and N. Fatkullin. Proton NMR dipolar-correlation effect as a method for investigating segmental diffusion in polymer melts, *J. Chem. Phys. (Commun.)* 144 (2016) 241101.
- O. Neudert, C. Mattea, S. Stapf, A compact X-Band resonator for DNP-enhanced Fast-Field-Cycling NMR, *J. Magn. Reson.* 271 (2016) 7.
- Y. Gossuin, T. Orlando, M. Basini, D. Henrard, A. Lascialfari, C. Mattea, S. Stapf and Q. L. Vuon. NMR relaxation induced by iron oxide particles: testing theoretical models, *Nanotechnology* 27 (2016) 155706.
- M. Velasco, E. Silletta, C. Gomez, M. Strumia, S. Stapf, G. Monti, C. Mattea and R. Acosta, Spatially Resolved Monitoring of Drying of Hierarchical Porous Organic Networks, *Langmuir* (2016).
- A. Ordikhani Seyedlar, S. Stapf and C. Mattea, Dynamics of the ionic liquid 1-butyl-3-methylimidazolium bis(trifluoromethylsulphonyl)imide studied by nuclear magnetic resonance dispersion and diffusion, *Phys. Chem. Chem. Phys.* 17 (2015) 1653.
- S. Ghoshal, P. Denner, S. Stapf, C. Mattea, Study of the Formation of Poly(vinyl alcohol) Films, *Macromolecules* 45, 1913 (2012).
- M. Davidovic, C. Mattea, J. Qvist, B. Halle. Protein Cold Denaturation as Seen From the Solvent. *J. Am. Chem. Soc.* 131, 1024 (2009).
- C. Mattea and R. Kimmich. Flow-enhanced molecular reorientations and interfacial slip probed by field-cycling NMR relaxometry in microscopic pores. *Phys. Rev. Lett.* 94, 024502 (2005).
- C. Mattea, R. Kimmich, I. Ardelean, S. Wonorahardjo, G. Farrher, Molecular exchange dynamics in partially filled microscale and nanoscale pores of silica glasses studied by field-cycling nuclear magnetic resonance relaxometry, *J. Chem. Phys.* 121 (2004) 10648.

Academic and scientific Administration

Member of the scientific organising committee for the International Conference on Magnetic Resonance in Porous Media (2010-2014) / (2016-2018) / 2002.

Member of the Berufungskommission "Experimentalphysik I" (W3) in 2013, and "Experimentalphysik II" (W2) in 2011, TU Ilmenau.

Member of the "Institutsrat" of the Institute of Physics, Ilmenau University of Technology (2011-2013).

Reviewer for scientific journals (*Macromolecules*, *J. Phys. Chem.*, *J. Magn. Reson.*, *PCCP*, *Microporous and Mesoporous Materials*, *J. Phys. Cond. Matter*, *New Journal of Physics*, *Diffusion Fundamentals*).

Responsible and advisor of students in the frame of the **IAESTE-DAAD** program in the section of Polymer Physics, in the Ilmenau University of Technology (since 2009).

Collaborations

Prof. Pedro Sebastiao, Prof. Fabian Vaca-chavez. Ionic Liquids, Lisabon, Portugal.

Prof. Eduardo Acosta and Prof. Esteban Anardo. Relaxometry in Porous Media, Group NMR Cordoba, Argentina, Dr. M. Hürlimann, Schlumberger, USA. Oil, Porous Media.

Prof. J. Stepisnik, Group NMR Liubjana, Eslovenia. NMR in complex fluids, Imaging, Porous Media.

Prof. Yves Gossuin, UMONS, Belgium. Relaxometry in Biological Physics.

Prof. Ioan Ardelean, Cluj, Rumania. Diffusion and relaxation in nanomaterials.

Prof. Nail Fatkullin, Kazan, Russia. Polymer theory and experimental.

Prof. Michael Köhler, Ilmenau, Germany. Porous media.

Dr. rer. nat. Carlos Mattea
Ilmenau, December 2016