

Dr. Anna Fischer

Personal Details

Date of birth: 13.09.1981 **e-mail:** anna.fischer@tu-berlin.de

Nationality: German/French

Education

2005-2008: PhD at the Max Planck Institute for Colloids and Interfaces (MPIKG), Potsdam
2004-2005: Master of Material Chemistry, University Pierre et Marie Curie, Paris
2003-2004: Maîtrise de Chimie, University Pierre et Marie Curie, Paris
2002-2003: Magistère de Chimie, École Normale Supérieure (ENS), Paris
2001-2002: DEUG de Physique Chimie, University Pierre et Marie Curie, Paris
2000-2001: Classes Préparatoires, PCSI, Lycée Henri IV, Paris
1999-2000: Baccalauréat, Lycée Buffon, Paris

Research Experience

November 2009: Junior research group leader at the TU Berlin/UniCat
Nanostructured bioelectrodes

July 2008-October 2009: Full research position (post-doc) at the MPIKG/ Biomaterials Dep.
Biom mineralization of magnetite nanocrystals in magnetotactic bacteria

April-June 2008: Full research position at the MPIKG/ Colloid Dep.

Nov. 2005-March 2008: PhD at the MPIKG/Colloid Dep.
Supervisor: Prof. Dr. M. Antonietti and Dr. A. Thomas.
Synthesis of nanostructured metal nitrides through reactive hard-templating

Feb.-July 2005: Master at the Laboratoire de chimie de la matière condensée (LCMC) Paris. Supervisor : Prof. Dr. C. Sanchez and Dr. D. Grosso
Synthesis of TiO₂ surface nano-patterns through organic/inorganic self-assembly

Publication List

- 1) Brezesinski, T.; [Fischer, A.](#); Iimura, K.; Sanchez, C.; Grosso, D.; Antonietti, M.; Smarsly, B.M., Generation of self-assembled 3D mesostructured SnO₂ thin films with highly crystalline Frameworks. *Advanced Functional Materials* **2006**, 16, (11), 1433-1440.
- 2) [Fischer, A.](#); Kuemmel, M.; Jarn, M.; Linden, M.; Boissiere, C.; Nicole, L.; Sanchez, C.; Grosso, D., Surface nanopatterning by organic/inorganic self-local assembly and selective local functionalization. *Small* **2006**, 2, (4), 569-574.
- 3) Goettmann F.; [Fischer A.](#); Antonietti A.; Thomas A., Chemical synthesis of mesoporous carbon nitrides using hard templates and their use as a metal free catalyst for Friedel-Crafts reaction of benzene. *Angewandte Chemie-International Edition* **2006**, 45, (27), 4467-4471.
- 4) Goettmann, F.; [Fischer, A.](#); Antonietti, M.; Thomas, A., Metal-free catalysis of sustainable Friedel-Crafts reactions: direct activation of benzene by carbon nitrides to avoid the use of metal chlorides and halogenated compounds. *Chemical Communications* **2006**, (43), 4530-4532.
- 5) Goettmann, F.; [Fischer, A.](#); Antonietti, M.; Thomas, A., Mesoporous graphitic carbon nitride as a versatile, metal-free catalyst for the cyclisation of functional nitriles and alkynes. *New Journal Of Chemistry* **2007**, 31, (8), 1455-1460.
- 6) [Fischer, A.](#); Antonietti, M.; Thomas, A., Growth confined by the nitrogen source: Synthesis of pure metal nitride nanoparticles in mesoporous graphitic carbon nitride. *Advanced Materials* **2007**, 19, (2), 264.
- 7) [Fischer, A.](#); Makowski, P.; Mueller, J. O.; Antonietti, M.; Thomas, A.; Goettmann, F., High-surface-area TiO₂ and TiN as catalysts for the C-C coupling of alcohols and ketones. *ChemSuschem* **2008**, 1, (5), 444-449.
- 8) Baccile, N.; [Fischer, A.](#); Julian-Lopez, B.; Grosso, D.; Sanchez, C., Core-shell effects of functionalized oxide nanoparticles inside long-range meso-ordered spray-dried silica spheres. *Journal Of Sol-Gel Science And Technology* **2008**, 47, (2), 119-123.

- 9) Thomas, A.; Fischer, A.; Goettmann, F.; Antonietti, M.; Muller, J. O.; Schlögl, R.; Carlsson, J. M., Graphitic carbon nitride materials: variation of structure and morphology and their use as metal-free catalysts. *Journal Of Materials Chemistry* **2008**, 18, (41), 4893-4908.
- 10) Fischer, A.; Muller, J. O.; Antonietti, M.; Thomas, A., Synthesis of Ternary Metal Nitride Nanoparticles Using Mesoporous Carbon Nitride as Reactive Template. *Acs Nano* **2008**, 2, (12), 2489-2496.
- 11) Fischer, A.; Jun, Y. S.; Thomas, A.; Antonietti, M., Synthesis of High-Surface-Area TiN/Carbon Composite Materials with Hierarchical Porosity via "Reactive Templating". *Chemistry Of Materials* **2008**, 20, (24), 7383-7389.
- 12) Faivre D.; Fischer A.; Garcia-Rubio I.; Mastrogiacomo G.; Gehring A., Development of Cellular Magnetic Dipoles in Magnetotactic Bacteria. *Biophysical Journal*, **2010**, 99, (4), 1268-1273.
- 13) Polte J.; Herder M.; Eler R.; Rolf S.; Fischer A.; Würth C.; Thünemann A., Kraehnert R.; Emmerling F., Mechanistic insights into seeded growth processes of gold nanoparticles , *Nanoscale*, **2010**, 2, 2463-2469.
- 14) Peng L.; Wollenberger U.; Kinne M.; Hofrichter M.; Ullrich R.; Scheibner K.; Fischer A.; Scheller F.W., Peroxygenase based sensor for aromatic compounds. *Biosensors and Bioelectronics* **2010**, 26, 1432-1436
- 15) Fischer A.; Schmitz M.; Aichmayer B.; Fratzi P.; Faivre D., Structural purity of magnetite nanoparticles in magnetotactic Bacteria. *J. R. Soc. Interface*, published online 19.01.2011,doi: 10.1098/rsif.2010.0576.
- 16) Yarman A.; Nagel T.; Gajovic-Eichelmann N.; Fischer A.; Wollenberger U.; Scheller F. W., Bioelectrocatalysis by Microperoxidase-11 in a Multilayer Architecture of Chitosan Embedded Gold Nanoparticles, *Electroanalysis*, **2011**, DOI: 10.1002/elan.201000535.
- 17) Sokolov S.; Paul B.; Ortel E.; Fischer A.; Kraehnert R., Template-Assisted Electrostatic Spray Deposition as a New Route to Mesoporous, Macroporous and Hierarchically Porous Oxide Films, *Langmuir*, **2011**, DOI: 10.1021/la104272h.
- 18) Zhu J.; Kailasam K.; Fischer A.; Thomas A.; Supported cobalt oxide nanoparticles as catalyst for aerobic oxidation of alcohols in liquid phase, *ACS Catalysis*, **2011**.
- 19) Sivanesan A.; Ly H.K.; Kozuch J.; Sezer M.; Kuhlmann U.; Fischer A.; Weidinger I. M., Functionalized Ag nanoparticles with tunable optical properties for selective protein analysis, *Chem. Comm.*, **2011**, DOI:10.1039/C0CC05058J.
- 20) Li X.; Zhang J.; Chen X.; Fischer A.; Thomas A.; Antonietti M.; Wang X.; Condensed Graphitic Carbon Nitride Nanorods by Nanoconfinement: Promotion of Crystallinity on Photocatalytic Conversion, *Chem. Mater*, **2011**, DOI:10.1021/cm201688v.

Awards	2009: Max Planck Society – Dieter Rampacher Prize
Organization	Member of the Executive Board of UniCat DFG Excellence Cluster
Languages	German / French (bilingual) ; English (fluent)