

## Dr Zoe Schnepf

Birmingham Fellow

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### About

Zoe Schnepf is a Birmingham Fellow and her research focus is the creation of functional nanomaterials from renewable resources. In particular, she is interested in using biomass to produce sustainable catalysts for various applications, such as energy generation and transfer.

[Group web pages \(http://schnepfgroup.wordpress.com/\)](http://schnepfgroup.wordpress.com/)

### Qualifications

#### Lecturer in Chemistry:

- PhD in Chemistry, University of Bristol, 2009
- MSci (Hons) in Chemistry with Industrial Experience, University of Bristol, 2005

### Biography

Zoe Schnepf completed a PhD with Professor Stephen Mann at the University of Bristol in 2009. She then held a postdoctoral fellowship at the Max Planck Institute for Colloids and interfaces in Germany before moving to the National Institute for Materials Science in Japan. Here, she was awarded an independent postdoctoral fellowship in the International Center for Young Scientists. In 2012, she returned to the UK as a Birmingham Fellow.

### Research

#### RESEARCH THEMES

- Green nanochemistry
- Biopolymers as a flexible resource for nanochemistry
- Catalysts from abundant elements
- Photocatalysis
- Nanocomposites
- Functional carbon from renewable resources

### Publications

#### Selected Recent Publications:

- Biopolymers as a Flexible Resource for Nanochemistry, Z. Schnepf, *Angew. Chem. Int. Ed.* 2012, Accepted
- One-step route to a hybrid  $\text{TiO}_2/\text{Ti}_x\text{W}_{1-x}\text{N}$  nanocomposite by *in-situ* selective carbothermal nitridation, Z. Schnepf, M. J. Hollamby, M. Tanaka, Y. Matsushita, Y. Katsuya, Y. Sakka, *Sci. Tech. Adv. Mater.*, 2012, accepted.
- One pot route to sponge-like  $\text{Fe}_3\text{N}$  nanostructures, Z. Schnepf, M. Thomas, S. Glatzel, K. Schlichte, R. Palkovits, C. Giordano, *J. Mater. Chem.* 2011, 21, 17760.
- A flexible one-pot route to metal/metal oxide nanocomposites, Z. Schnepf, S. R. Hall, M. J. Hollamby, S. Mann, *Green Chemistry*, 2011, 13, 272.
- Biotemplating of metal carbide microstructures: The magnetic leaf, Z. Schnepf, W. Yang, M. Antonietti, C. Giordano, *Angew. Chem. Int. Ed.*, 2010, 49, 6564.
- Synthesis of highly magnetic iron carbide nanoparticles via a biopolymer route, Z. Schnepf, S. C. Wimbush, C. Giordano, M. Antonietti *Chem. Mater.*, 2010, 22, 5340.
- Alginate-mediated routes to the selective synthesis of complex metal oxide nanostructures, Z. Schnepf, S. C. Wimbush, S. Mann, S. R. Hall, *CrystEngComm*, 2010, 12, 1410.
- Structural evolution of superconductor nanowires in biopolymer gels, Z. Schnepf, S. C. Wimbush, S. Mann, S. R. Hall, *Adv. Mater.*, 2008, 20, 1782.