

# Curriculum Vitae

## Mark Richard Wilson, Durham University

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### Summary of Career

08/2014 – 07/2017 Head of Chemistry, Durham University  
10/2009 – present, Professor of Chemistry, Durham University  
10/2006 – 9/2009, Reader in Chemistry, Durham University  
10/2000 – 9/2006, Senior Lecturer in Chemistry, Durham University  
12/1995 – 9/2000, Lecturer in Chemistry, Durham University  
12/1990 – 11/1995, Lecturer in Physics, Lancaster University  
12/1998 – 11/1990, SERC Personal fellowship, H. H. Wills Physics Laboratory,  
Bristol University

### Summary of Education

Ph.D. in Physical Chemistry (1985-1988), University of Sheffield  
B. Sc., First Class Honours in Chemistry (1982-85), University of Sheffield

### Publication Summary

104 Papers and Book Chapters.

### Research Area Summary: Computer Simulations of Liquid Crystals

- Has carried out some of the key atomistic and coarse-grained simulation modelling studies to understand both thermotropic and lyotropic liquid crystals (LCs) at a molecular level, providing new understanding of both structure and dynamics.
- Has developed new coarse-grained molecular simulation models for liquid crystals, colloids and LC polymers/dendrimers, and developed multiscale simulation approaches for studying a variety of liquid crystalline systems.

### Five key publications

- *Self-assembly and mesophase formation in a non-ionic chromonic liquid crystal system: insights from dissipative particle dynamics simulations.* Walker, M., Masters, A. J., Wilson M. R. PCCP, 2014, 16.42: 23074-23081. *(the first full simulation of a chromonic phase diagram)*
- *Molecular Order in a Chromonic Liquid Crystal: A Molecular Simulation Study of the Anionic Azo Dye Sunset Yellow.* Chami F., Wilson M. R., J. Am. Chem. Soc., 2010, 132, 7794. *(the first simulation study to properly understand the structure of a chromonic system at an atomistic level)*
- *Atomistic Simulations of a Thermotropic Biaxial Liquid Crystal.* Pelaez J., Wilson M. R., Phys. Rev. Lett., 2006, 97, 267801. *(the first atomistic simulation attempt to understand the structure of bent core nematics)*
- *Molecular Dynamics Simulations of Flexible Liquid Crystal Molecules Using a Gay Berne/Lennard-Jones Model.* Wilson M.R. J. Chem. Phys., 1997, 107, 8654. *(one of the first molecular simulation studies that attempts to develop a coarse-grained model for a liquid crystal model in terms of an atomistic reference)*
- *Computer Simulations of Mesogenic Molecules using Realistic Atom-Atom Potentials.* Wilson M. R. and Allen M. P. Molec. Cryst. Liq. Cryst., 1991, 198, 465-477. *(one of the earliest atomistic simulation studies of a thermotropic system – 100 citations)*

A full list of papers is available at <http://orcid.org/0000-0001-6413-2780>  
or from the web page <http://community.dur.ac.uk/mark.wilson/publications.html>

## Esteem indicators

- Fellow of the Royal Society of Chemistry (FRSC)
- Member of the EPSRC College
- EPSRC Funding: 17 EPSRC/SERC grants as PI or Col
- Former Chair and Vice Chair of the British Liquid Crystal Society
- Panel member for the Deutsche Forschungsgemeinschaft (DFG), German research council (2014)
- Chair of the Physics Review Panel - Academy of Finland – 2015 and 2016 (Finnish equivalent of the EPSRC)
- Organised 9 national/international conferences.
- Twice organiser of the British Liquid Crystal Conference (in Durham).
- Annual lecturer at the British Liquid Crystal Society Winter Workshop (for 20 years)
- Chair of the Scientific Committee for RSC Faraday Discussion 144 on Multiscale modelling
- Member of the Editorial Board of *Crystals* ending in 2016
- Editor for special modelling editions of *Soft Matter*, *J. Mater. Chem.*, *Faraday Discussions*
- Previous Committee member of RSC Statistical Mechanics & Thermodynamics Group, EPSRC CCP5 committee and the Polymer IRC committee
- Five students/PDRAs in the group have gone onto academic positions at other universities.
- Winner of a Turner Prize from the University of Sheffield (Best Thesis)
- Winner of a Pilkinton Prize from the University of Lancaster (Best University Science Lecturer)
- Winner of the British Liquid Crystal Society Young Scientist Prize
- 2013 Durham Student's Union Lecturer of the Year for Science

## Brief Biography

Mark Wilson is Professor of Computational Chemistry and former Head of Chemistry at Durham. After obtaining a First Class degree in Chemistry in 1985 and a Ph.D. in 1988 from the University of Sheffield, he became a SERC Fellow at the H. H. Wills Physics Laboratory (University of Bristol). He took up his first lectureship post in the Department of Physics at the University of Lancaster 1990–1995, moved to Durham as a lecturer in chemistry in December 1995, became a professor in 2009 and Head of Department in August 2014. Awards include the British Liquid Crystal Society young scientist prize, a Turner prize from the University of Sheffield (best thesis prize), a Pilkington prize from the University of Lancaster (best teaching across science) and the Durham Student's Union Science Lecturer of the Year Award (2013). His research interests cover the area of soft matter simulations, concentrating on liquid crystals, polymers, dendrimers, complex fluids, proteins and membranes and nanostructured soft materials. Much of the work uses molecular dynamics and Monte Carlo methods employing simulations at both atomistic and coarse-grained levels. He has been chair of the British Liquid Crystal Society, chair of Faraday Discussion 144 on Multiscale Modelling of Soft Matter, and editor of special editions of *Soft Matter* (2009) and the *Journal of Materials Chemistry* (2010) devoted to modelling studies. He has given over 20 plenary and invited talks at national and international meetings over the last 6 years, is author of over 100 publications, and has been PI or Col on 17 successful grants awarded by the UK research council EPSRC in addition to a series of grants from industry. He is a fellow of the Royal Society of Chemistry (FRSC).