

Dr Natalie Rowley BSc, PhD, SFHEA, CChem MRSC

Senior Lecturer and Director of Innovation in Teaching in the School of Chemistry

[School of Chemistry \(/schools/chemistry/index.aspx\)](/schools/chemistry/index.aspx)

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About

Natalie Rowley is a Senior Lecturer and Director of Innovation in Teaching in the School of Chemistry. She has been project leader on a number of University of Birmingham Learning Development projects in the areas of e-Learning and Enquiry-Based Learning, the latter of which led to her supervising the School's first MPhil student in Chemical Education research. She was also joint project lead on a National HE STEM project on Science Communication. She is currently joint project lead on a University of Birmingham STEM Education Centre project conducting research into enhancing the student learning experience through lecture flipping.

Qualifications

- Senior Fellow of the Higher Education Academy, 2013
- Fellow of the Higher Education Academy, 2007
- Postgraduate Certificate in Learning and Teaching in Higher Education, University of Birmingham, 2002
- Chartered Chemist Member of the Royal Society of Chemistry (CChem MRSC), 1994
- PhD in Chemistry, University of Birmingham, 1991
- BSc (Hons) in Chemistry, University of Birmingham, 1988

Biography

Natalie Rowley obtained her BSc (Hons) Degree (Class 1) in Chemistry in 1988. She studied the synthesis, characterisation and photochemistry of some peripherally-molybdenated tetraphenyl porphyrins in the Metal-Organic research group of Professor Jon McCleverty and Dr Chris Jones, and in other research groups world-wide, obtaining her PhD in 1991. Professor Ian Smith FRS was then her mentor for a year, whilst she studied the kinetic spectroscopy of multi-channel reactions using tunable infrared diode lasers. She then studied for a further three years in the research group of Professor Sir Fraser Stoddart FRS (with Professor Ian Smith FRS and Dr Chris Jones as co-supervisors) conducting research into the synthesis and photoinduced electron transfer properties of some [2]rotaxanes and [2]catenanes.

Natalie was appointed as a Lecturer in the School of Chemistry at the University of Birmingham in 1995 and was promoted to Senior Lecturer in 2013. She was awarded a Postgraduate Certificate in Learning and Teaching in Higher Education from the University of Birmingham in 2002 and became a member of the Institute of Learning and Teaching (ILT) in 2004. She was awarded Fellowship of the Higher Education Academy (FHEA) in 2007 and became a Senior Fellow of the Higher Education Academy (SFHEA) in 2013.

Natalie became a Chartered Chemist Member of the Royal Society of Chemistry (CChem MRSC) in 1994 and is currently a committee member of the Royal Society of Chemistry's Tertiary Education Group and an elected member of the Royal Society of Chemistry's Education Division Council.

Natalie was awarded a University of Birmingham Teaching Fellowship in 2006 and was awarded the Head of School Prize for Excellence in Teaching in the School of Chemistry in 2010. She was appointed as Educational Enhancement Fellow for the College of Engineering and Physical Sciences between 2010 and 2012. She is currently the lead facilitator of the University of Birmingham's STEM Education Network.

Teaching

Teaching Programmes

- "The Periodic Table" module for EPS and BFS Foundation Year students
- "Spectroscopy and Integrated Problem Solving" component of CHM1C1 module on "Structure and Bonding"
- "Principles of Gravimetric and Volumetric Analysis" component of CHM1S3 module on "Introduction to Analytical Chemistry"
- "Science Communication" module CHM2S5
- "Inorganic Chemistry" component of CHM134 module on "Chemistry for Students of Biochemistry"
- "Spectroscopic Techniques" component of CHM185 module on "Chemistry for Engineering Students"
- "Basic Spectroscopy" component of CHM252 module on "Chemistry for Students of Biochemistry"

Publications

N. Rowley (2013). 'Flipping' shows how technology can be applied to teaching. **SCHOMS Connections**, 4, 11.

J. Green and N. Rowley (2013). Lecturing without Lectures – Our Experiences of "Lecture Flipping" in Biology and Chemistry. **Proceedings of HEA STEM Annual Conference, University of Birmingham.**

N. Rowley and J. Wilkie (2012). Science Communication. **Proceedings of HEA STEM Annual Conference, Imperial College.**

T. Lucas and N.M. Rowley (2011). Enquiry-based learning: experiences of first year chemistry students learning spectroscopy. **Chemistry Education Research and Practice**, 12, 478-486.

E.M. Page, D. Read and N.M. Rowley (2011). Sowing the seeds of change: students taking the lead in chemical education research projects. **New Directions in the Teaching of Physical Sciences**, 7, 69-71.

N. Rowley and J. Wilkie (2011). Science Communication and the Media, **Proceedings of Variety in Chemistry Education** (T.L Overton, Ed). RSC, ISBN: 978-1-84973-431-8, p18

N Rowley, T Lucas, M McLinden, T Overton (2008). Preliminary Findings of Using Enquiry-Based Learning in First Year Undergraduate Chemistry. **Birmingham Education, Theory and Action** 1(2), 9-16.

T Lucas and N Rowley (2008). Preliminary Findings of Using Enquiry-Based Learning in Chemistry. **Proceedings of Variety in Chemistry Education** (T L Overton, Ed.) RSC. ISBN: 1-84755-835-6, p15.

T Lucas and N Rowley (2007). Our First Steps in Enquiry-Based Learning in Chemistry. **Proceedings of Variety in Chemistry Education** (T L Overton, Ed.) RSC. ISBN: 1-84755-751-1, p15.

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