

Curriculum Vitae - Professor Neil R. Champness

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Employment

- 01/21–present: Norman Haworth Professor of Chemistry, University of Birmingham.
- 08/04-12/20: Professor of Chemical Nanoscience, University of Nottingham.
- 08/14-12/20: Global Research Theme Leader: Transformative Technologies, University of Nottingham.
- 07/13-02/18: Head of Inorganic and Materials Chemistry, University of Nottingham.
- 08/03-07/04: Reader in Chemistry, University of Nottingham.
- 08/98-07/03: Lecturer in Inorganic Chemistry, University of Nottingham.
- 10/95-07/98: Teaching Fellowship, University of Nottingham.
- 10/94-09/95: Teaching Fellowship, University of Southampton.
- 10/93-09/94: Postdoctoral Research Assistant, University of Southampton (Supervisor: G. Reid).

Education: *University of Southampton*

- 1990-93: Ph.D. - Studies in Ruthenium and Osmium Coordination Chemistry (Supervisor: W. Levason).
- 1989-90: M.Phil. - Synthesis and Electrochemical Studies of Some Phosphine and Arsine Complexes of Ruthenium and Osmium (Supervisor: W. Levason).
- 1986-89: B.Sc. (Hons.) in Chemistry.

Awards and Esteem

- 2020: Member of the Academia Europaea (MAE)
- 2020-2022: Visiting Professor at Nagaoka University of Technology
- 2019: Fellow of the European Academy of Sciences.
- 2019: EPSRC Established Career Fellowship.
- 2016: Royal Society of Chemistry Surfaces and Interfaces Award.
- 2014-2016: Thomson Reuters Highly Cited Researcher.
- 2014: Visiting Professor at the University of Adelaide, Australia.
- 2013: Fellow of the Learned Society of Wales (FLSW).
- 2013: Fellow of International Union of Pure and Applied Chemistry (IUPAC).
- 2011: Royal Society Wolfson Merit Award.
- 2011: Visiting Professor at Institut Le Bel, University of Strasbourg, France.
- 2011: Named as one of the world's Top 100 Most Cited Chemists by Thomson Reuters.
- 2010: Royal Society Leverhulme Trust Senior Research Fellowship.
- 2010: Royal Society of Chemistry Supramolecular Chemistry Award.
- 2009: Visiting Professor at UNESP (São Paulo State University, Brazil).
- 2008: Fellow of the Royal Society of Chemistry (FRSC).
- 2008-2013: Senior Advisor to the British Council on matters relating to Science & Engineering.
- 2006: Corday-Morgan Medal of the Royal Society of Chemistry.
- 2005: Bob Hay Lectureship of the RSC Macrocycles and Supramolecular Chemistry Group.

Research Interests, Publications and Patents

I have pursued research in many aspects of supramolecular chemistry, crystal engineering and chemical nanoscience. The focus of my research group is molecular organisation in the solid-state, solution-based self-assembly of nanoscale molecular architectures and success in surface molecular organisation.

Total of over 290 research papers or review articles, an edited book and 3 patents, including papers in *Nature* and *Science*; see appended pages. H-index (05/2022) of 80, $I^{100} = 68$, with more than 24,500 citations.

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Professional Organisations and Committees

- Leverhulme Trust Research Awards Advisory Committee (2022-2026).
- Learned Society of Wales Dillwyn Medal Committee (2021).

- UK Research and Innovation Future Leaders Fellowships Core Panel College (2019-present).
- Philip Leverhulme Prizes in Chemistry, Leverhulme Trust (2019).
- Scientific Advisory Board for the Cambridge Crystallographic Data Centre (CCDC) (2019-present).
- Learned Society of Wales A3 Scrutiny Committee (2019-2021).
- European Science Foundation College of Expert Reviewers (2019-2021).
- Royal Society Research Appointment Panel A(ii) (2018-2023).
- Irish Research Council Laureate Awards Panel (2017-18).
- Royal Society Newton International Fellowships Committee (2017-2022).
- International Advisory Group for “Integration of Computation and Experiment for Accelerated Materials Discovery” Programme Grant Research Consortium – University of Liverpool.
- Royal Commission for the Exhibition of 1851, Science and Engineering Fellowships Committee (2015-present).
- Fundação para a Ciência e a Tecnologia, I.P. (FCT), Portuguese Public Funding Agency, "Chemistry and Chemical Engineering" panel (2015).
- External Advisory Board to Institut de Ciència Molecular (ICMol), University of Valencia (2019-present).
- External Advisory Board to University of Cambridge NanoDTC (2014-present). Chair from 2019.
- International Advisory Group for “Metastable State Materials” Programme Grant Research Consortium – University of Bath.
- Honorary Member of the British Council.
- Senior Advisor to the British Council Science and Engineering Advisory Group.
- Member of the IUPAC Task Group “Coordination polymers and metal organic frameworks: terminology and nomenclature guidelines”.
- “Network Champion” for EPSRC Directed Assembly of Extended Structures Grand Challenge Network.
- Member of EPSRC College 2006-present.
- Member of Dalton Council of the Royal Society of Chemistry (2005-2012).
- Chair of the UK National Crystallography Service Management and Advisory Panel (2013-2017).
- Member of the UK National Crystallography Service Management and Advisory Panel (2010-2013).
- Expert Evaluator EU FP7, NMP Research Programme.
- Expert Evaluator European Research Council.
- Member of Materials Chemistry Forum of the Royal Society of Chemistry (2005-2008).
- Chair of the RSC Chemical Nanoscience and Nanotechnology Interest Group (2005-2007).
- Member of the Institute of Materials Committee for Nanotechnology.
- Chartered Chemist (CChem).
- Referee for Norwegian Research Council; Research Grants Council (RGC) of Hong Kong; Swiss National Science Foundation; ACS Petroleum Research Fund.

Journals and Editorial Boards

- Member of the Advisory Board *Molecular Systems Design & Engineering* (2017-present).
- Member of the Editorial Board of *Chem* (2015-present).
- Chairman of the Editorial Board of *CrystEngComm* (2007-2010).
- Member of the Editorial Board of *CrystEngComm* (2003-2006).

Public Profile, Public Awareness and Outreach

The research of the Champness group has received high profile press coverage over a number of years including interviews on *BBC Radio 4*, *BBC World Service* and features online and in the printed press. A number of research papers have also been covered by the scientific press including *Science*, *Nature* Family journals, *Chemistry World*, *Physics Today*.

Activities for science communication to the public have included being the lead exhibitor at the Royal Society Exhibition in 2004 (Catch that Molecule) and a co-exhibitor at the Royal Society Exhibitions in 2008 (Carbon in Wonderland) and 2010 (Diamond Light Source Exhibit). Public lectures have been given in ten different countries around the world discussing the societal impact of nanotechnology, including radio interviews in a number of countries and a TV appearance in South Korea. In 2015, I delivered a Discourse at the Royal Institution entitled “From Molecules to Nanoscale Machines: Building the Future”.

Public Awareness Presentations

- Royal Institution – Friday Discourse 2015. “From Molecules to Nanoscale Machines: Building the future”.
- “The Energy Storage Challenge: which Contribution from Chemical Sciences” (EU Parliament, Brussels, 02/2014).
- Royal Society Summer Exhibition 2004. Principal exhibitor – “Catch That Molecule!”
- Royal Society Summer Exhibitions 2008 (Carbon in Wonderland) and 2010 (Diamond Light Source Exhibit)
- Café Scientifique presentations.
Nanjing, China (10/2010); Nantong, China (10/2010); Bath, UK (10/2007); Seoul, South Korea (twice in 03/2007); Daugavpils, Latvia (11/2006); Riga, Latvia (11/2006); Brussels, Belgium (10/2006); Vilnius, Lithuania (09/2006); Kaunas, Lithuania (09/2006); Nottingham, UK (11/2005); Nicosia, Cyprus (06/2005); Tartu, Estonia (11/2004); Helsinki, Finland (11/2004).
- National Conference of the National Women’s Register (Bath, 09/2008).

Research Group

- Current PDRAs; Dr. Nicholas Pearce, Sarah Griffin, Georgia Orton.
- Current Ph.D. Students: completing Ph.D. thesis - Mark Newman, Nathan Andersen, Olukayode Babarinde; 3rd year – Alex Lewis, Asia Almuhana, Jen Robertson; 2nd year - Musa Mahmud, Callum Rosenberg, Georgia Rowe; 1st year – Danielle Johnson
- Previous PDRAs: Drs. Ana Geer Ramos, C. Pfeiffer, L. Yang, A. Laybourn, A.G. Slater, S.P. Argent, J. Jia, M.C. Gimenez-Lopez, G. Goretzki, D. Lahaye, X. Lin, D.-L. Long, E. Kassianidis, J. Hamblin.
- Supervision of researchers; 42 completed Ph.D. Students, Drs C. Housley, J. Ogar, E. Frampton, R. Young, A. Patel, C. Gidman, J. Warfsmann, H. Hassanain, P.Langer, C. Toft, H. Martin, S. Quinn, R. Alshgari, S. Haddow, H. Mackilligin, N. Pearce, T. Hames, B. Llewellyn, S. Harrold, B. Mangham, T. Reade, V.J. Richards, A. Greenaway, C. Salesiotis, B. Slater, A. Slater, N. Taleb, A. Bouhroum, S. Bianketti, T. Chamberlain, D. Smith, D.J. Ring, F. Thebault, C. Carling, R.J. Hill, P.V. Mason, J.W. Cunningham, O.V. Dolomanov, N.S. Oxtoby, J.E.B. Nicolson, S.A. Barnett and A.N. Khlobystov.

Conference Organisation

- Member of the Scientific Organising Committee of 16th International Conference on Materials Chemistry (MC16); Dublin (07/2023).
- Faraday Discussion - “Harnessing Non-covalent Interactions for Synthesis and Catalysis” – York, UK (2023)
- International Scientific Committee – XVIII National Molecular Materials Meeting. - Santiago de Compostela, Spain (10/2020).
- International Scientific Committee – 2nd Conference on Metal Organic Frameworks and Porous Polymers, EuroMOF 2017 – Delft, Netherlands (10/2017).
- Scientific Organising Committee: Faraday Discussion Complex Molecular Surfaces and Interfaces (2017).
- International Advisory Board; MOF-2016 5th International Conference on Metal-Organic Frameworks & Open Framework Compounds – Long Beach, California, USA (08/2016).
- International Scientific Committee – 1st Conference on Metal Organic Frameworks and Porous Polymers, EuroMOF 2015 – Potsdam, Germany (10/2015).
- International Scientific Committee – 4th International Conference on Metal-Organic Frameworks and Open Framework Compounds, MOF 2014 – Kobe, Japan (09/2014).
- Session Chairman 19th International Vacuum Conference – Paris, France (IVC-19), (09/2013).
- Scientific Organising Committee SNIC-RSC Joint Symposium on Inorganic Chemistry, Singapore (01/2013).
- Scientific Organising Committee; International Symposia on Advancing the Chemical Sciences (ISACS6) - Challenges in Organic Materials & Supramolecular Chemistry Beijing China (09/2011).
- UK Scientific Organising Committee; AGICHEM 2011, Heidelberg, Germany (09/2011).
- Principal Organiser Shanghai EXPO; Alternative Energy – Hydrogen Storage Symposium (10/2010).
- Member of the Scientific Organising Committee for 2nd EuCheMS Chemistry Congress, Turin (09/2008).
- Member of the Scientific Organising Committee for Joint RSC - Chinese Chemical Society Symposium on Nanotechnology; Nottingham (04/2008).
- Organiser of Symposium for BCA conference “Design of Materials”; York (04/2008).
- Member of the Scientific Organising Committee of Materials Chemistry 8 (MC8): Advancing Materials By Chemical Design; London (07/2007).

- Member of the Organising Committee for Chemical Nanoscience and Nanotechnology Interest Group meeting – Durham (09/2006).
- Chairman of the Organising Committee for Chemical Nanoscience and Nanotechnology RSC meeting - Nottingham (03/2005).
- Chairman of the Organising Committee for CECD2 (RSC meeting *CrystEngComm* – Discussion 2) - Nottingham (09/2004).
- Member of the local organising committee for RSC Platinum Group Metals International Conference - Nottingham (07/1999).
- Member of the local organising committee for UK Macrocycles and Supramolecular Chemistry Subject Group Annual Meeting – Nottingham (01/1998).

University and School Administrative Responsibilities

University of Birmingham

- School of Chemistry Leadership Team (2021 – present).
- School League Table Working Group (2021).

University of Nottingham

- University Global Research Theme Leader: Transformative Technologies (2014–2020).
- Head of Inorganic and Materials Chemistry (2013 - 2018).
- University Research Board (2014-2020).
- Faculty of Science Research Board (2014-2020).
- Faculty of Engineering Research Board, *ex-officio* (2014-2020).
- Leader of Doctoral Thematic Program – Low-Dimensional Materials and Interfaces (2016-2020).
- Member of School Management Group (2008 - 2018).
- School of Chemistry REF Coordinator (UoA8) (2011-2014).
- Deputy Head of Department of Inorganic Chemistry (2008-2009).
- Chairman of School Equality and Diversity Committee (2008-2012).
- Course Director of MSc in Nanoscience (2005-2011).
- Member of School of Chemistry Research Committee (2005-2008, 2011-2013).
- School of Chemistry Examinations Officer (2011-2012).
- School of Chemistry Deputy Examinations Officer (2009-2011, 2012-2013).
- Representative of 4th year on School of Chemistry Teaching Committee (1998-2003).
- Inorganic Chemistry section organiser of final year MSci Research projects (1998-2008).
- Member of the School of Chemistry UCAS admissions team.
- Deputy course Organiser of 1st year Inorganic Chemistry undergraduate laboratory course (1998-2008).
- Personal tutor to *ca.* 20 undergraduates at within the Chemistry honours program.
- Organiser of the Inorganic Chemistry research colloquium program (1998-2001).

Teaching

- Associate Fellow of the Higher Education Academy (2019).
- Undergraduate courses lectured have included Supramolecular Chemistry (4th year and 3rd year), Advanced Inorganic Chemistry (4th year), Transition Metal Chemistry (1st, 2nd year) and Heavy Transition Metals (3rd year). Current total of 5 lectures + 2 seminars *p.a.*
- 1st, 2nd, 3rd & 4th year undergraduate tutorials given to both chemistry honours students and students taking chemistry as an optional module (currently 30 *p.a.*).
- Supervisor of final year (MSci.) undergraduate projects (3-4 *p.a.*).
- Demonstrator in 1st year undergraduate teaching laboratory classes (*ca.* 45 hrs. *p.a.*, 1998-2013).

External Examining

Inorganic Chemistry Undergraduate Degrees External Examiner:

- University of Southampton (2020-2023)
- Nottingham Trent University (2019-2022)
- University of Cambridge MRes in Nanotechnology (2016-2018)
- University of Oxford (2016-2018)
- University of Sheffield (2015-2018)

- University of Durham (2014-2017)
- University College Cork (2005-2008)

External Ph.D. examiner

- IIT Indore 04/22; IIT Kanpur 11/21; University of Adelaide 12/13; University of Bath 08/17, 10/15, 11/14; University of Birmingham, 01/08; University of Bristol 04/18, 01/13, 04/11, 11/03, 02/01, 11/99; University of Cambridge 05/20, 05/17 (Physics), 08/16, 09/12; University of Cardiff 04/21, 06/11, 12/04; Chalmers Technical University, Gothenburg, Sweden, 03/09; University of Belfast 01/05; University College Cork, 10/06; University College London, 11/21; Durham University, 9/21; University of Glasgow, 9/19, 10/16, 08/15, 09/09, 02/07; Katholieke Universiteit Leuven 09/19; University of Liverpool 08/13; University of Loughborough 12/03; University of Melbourne 05/11; Motilal Nehru National Institute of Technology Allahabad 08/13; University of Oxford, 01/22, 11/21, 11/18, 10/07; University of Pune, India, 03/09; University of Sheffield 12/19, 12/16, 11/13, 07/07, 01/06; University of Southampton 06/20, 01/14, 04/03; University of St Andrews 12/13; University of Strathclyde 12/12.