

Professor Nicholas J. Long, FRSC

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Date of Birth: 11th June 1965

Employment

May 2011 - present	The Sir Edward Frankland BP Endowed Professor of Inorganic Chemistry, Imperial College London
Oct 2009 - Sept 2017	Head of Catalysis and Advanced Materials Research Section , Imperial College London
Oct 2006 - April 2011	Professor of Applied Synthetic Chemistry, Imperial College London
Oct 2002 - Sept 2006	Reader in Inorganic Chemistry, Imperial College London
Oct 1999 - Sept 2002	Senior Lecturer in Inorganic Chemistry, Imperial College London
Jan 1995 - Sept 1999	Governors' Lecturer in Inorganic Chemistry, Imperial College London
Oct 1993 - Dec 1994	Temporary Lecturer in Inorganic Chemistry, University of Cambridge
Oct 1992 - Sept 1993	The Adrian Research Fellow, Darwin College, University of Cambridge
Oct 1989 - Sept 1991	Demonstrator in Inorganic Chemistry, University of Exeter

Education

1986 - 1990	Ph.D. in Organometallic Chemistry, University of Exeter
1983 - 1986	B.Sc. Honours in Chemistry (First Class), University of Durham

Awards, Prizes, Measures of Esteem

- The Frank Southerden Ph.D. Scholarship, University of Exeter, 1986.
- The Adrian Research Fellowship, Darwin College, University of Cambridge, 1992.
- The Governors' Lectureship, Imperial College London, 1995.
- **Royal Society of Chemistry Award for Organometallic Chemistry, 2006.**
- **Leverhulme Trust Research Fellowship, 2009-10.**
- Distinguished Visiting Professor, Hong Kong Polytechnic University, 2010.
- Rector's Award for Excellence in Teaching, Imperial College London, 2010.
- Fellow, Royal Society of Chemistry (FRSC), 2011.
- Distinguished Visiting Professor, Hong Kong Baptist University, 2015.
- State Key Laboratory Senior Visiting Scholarship, Fudan University, China, 2015.
- **Royal Society Wolfson Research Merit Award, 2018-2022.**
- Visiting Research Professor, University of Hong Kong, 2019-2022.
- Dr Kennedy Wong Distinguished Visiting Professor, Hong Kong Baptist University, 2020-2023.
- **Royal Society of Chemistry Frankland Award, 2020.**

Research Profile

World-leading research programme, focussed on fundamental and applied synthetic inorganic and organometallic chemistry. International impact and reputation for probe design and application within biomedical imaging.

- **Publications: 229 research publications** (e.g. *Nature group* x5, *PNAS* x1, *Angew Chem* x10, *JACS* x9, *Chem Commun* x12, *Chem. Sci* x5); **2 textbooks** - (i) '*Metalloenes: An Introduction to Sandwich Compounds*', sole author, Blackwell, 1998; (ii) '*Chemistry of Molecular Imaging*', Eds. N. J. Long, W. T. Wong, Wiley, 2015); **4 book chapters**; **2 patents** (2018, 2020).
- **H-index: 50**; 9931 citations in total; 39 papers with over 50 citations, 21 with over 100.
- **Funding: Career centre, programme and project grant funding – over £30M. Currently:**
 - (i) 3D ultrafast ultrasound with microbubble contrast agents for imaging of molecular targets and perfusion in cancer, **Cancer Research UK**, C53470/A22353, 2016-2021, **£758k** (Tang, Aboagye, Long);
 - (ii) Quantum-Interference-Enhanced Thermoelectricity (QUIET), **EPSRC**, EP/N032977/1, 2016-2021, **£558k** (Lambert, Albrecht, Cohen, Long);

- (iii) Development of a fluorescent reporter probe for enzyme-activity of Heme Oxygenase 1 (HO-1), **British Heart Foundation**, PG/17/71/33242, 2018-2021, **£213k** (Boyle, Long, Mason);
- (iv) Metallocene Ringtronics: New Magnetic and Electronic Materials, **Royal Society**, Royal Society Wolfson Research Merit Award, 2018-2022, **£75k** (Long);
- (v) Next generation molecular imaging and therapy with radionuclides – Programme grant, EPSRC, EP/S032789/1, 2019-2024, **£6.44M** (Blower, Long et al);
- (vi) **InnoHub Cluster in Biomedical Research** (Hong Kong ITC, **\$HK 500M**, (**£2.65M** to Imperial), 2020-2024, Hong Kong University, Peking University, Imperial College London, Co-I and Imperial PI).

Leadership

Significant UK leadership for inorganic chemistry and biomedical imaging communities, via Centre grants and CDTs, symposia/workshops, researcher training.

- **Imperial Comprehensive Cancer Imaging Centre:** Deputy Director and Chemistry lead investigator, (CRUK/EPSRC/MRC/DoH £8.7M) (12/2008 – 11/2013) - *first College-wide centre in this area.*
- **EPSRC Centre for Doctoral Training in Medical Imaging:** Deputy Director and Imperial lead. 2013-2021 (£5.6M); Renewed 2019-2027 (£6.02M) – *first Medical Imaging CDT, uniquely and successfully encompassing all aspects of physical sciences and engineering in biomedical arena.*
- **Head of Research Section** (line manager of 13 academic staff) (2009 - 2017).
- **MRes in Bioimaging Sciences** – Founder and Director (2008-2013) – *first in UK.*
- **UK PET Network** – Steering group – *forming the first UK-wide network of PET researchers.*
- **Training/Legacy:** Thirteen former group members are now academics: (Charlotte Williams (Oxford), Mike Inkpen (USC, USA), Graeme Stasiuk (Hull), Philip Miller (Imperial), Xiyu Li (Shandong, China), Natasha Keasberry (Brunei), Pan Jie (Wuhan, China), Lijun Ziang (HK PolyU, China), Nazila Kamaly (Copenhagen/Imperial), Juan Gallo (Braga, Portugal), Joy Farnaby (Glasgow), Luke Wilkinson (York).
- **Research Group:** Previous - 15 PDRA, 51 PhD students successfully graduated; Current - 3 PDRA, 11 PhD, 2 MSci (current funding from EPSRC, MRC, CRUK, BHF).
- **Royal Society Discussion Meeting**, ‘*Chemistry of Molecular Imaging*’, organising committee (March 2017); **Royal Society Kavli Meeting**, ‘*Chemistry of Molecular Imaging*’, organising committee (March 2017); **RSC Dalton Discussion Meeting**, ‘*Metals for Imaging*’, York, organising committee (Sept 2014).
- **Anglo-China Biomedical Imaging Links and Collaborations** – establishing burgeoning range of activities in Hong Kong (*HKU, PolyU, CityU, BaptistU*) and mainland China (*PekingU, Nanjing, Fudan*) via Visiting Professorships, Advisory Roles and Collaborations e.g. Large-scale Research Collaborations e.g. *InnoHub Cluster in Biomedical Research (\$HK 500M, 2020-2024) – jointly Hong Kong University, Imperial College and Peking University*).

Professional Standing, Evidence of Esteem

Established on the national and international circuit for keynote/invited lectures, respected opinion for international funding agencies, committees and editorial boards.

Panels and Committees (External)

- Singapore Science Funding Scheme, Panel Member (2015-2020).
- Ireland Science Programme Grants, Panel Member & Chair (June 2013, June 2017, Sept 2018).
- Finland Science and Engineering Funding Council, Panel Member & Chair (Jan 2017, Jan 2018, Feb 2019).
- Hong Kong Research Grants Council, Physical Sciences Panel Member (2018-2021).
- EPSRC EPR National Facility steering board member (2012 -).
- EPSRC Chemistry College (2003 -).
- **REF 2021 panel member for sub-panel 8 (Chemistry).**
- UK Dementia Network Committee (2014 -).
- BiomagingUK Steering Group (2012 -).
- RSC Travel Grants Committee (2011-2016).
- EPSRC Chemistry College (2003 -).

Editorial Advisory Boards

- Scientific Reports, Nature Group, Editorial Board (2014 -).
- American Journal of Nuclear and Medical Imaging, Editorial Board (2013 -).
- Journal of Labelled Compounds and Radiopharmaceuticals, Editorial Board (2015 -).

- Imperial College Press, Chair of Chemistry Committee (2011-2015).
- Volume Editor, Comprehensive Coordination Chemistry III, Wiley (2019-2021).

University and Departmental Roles and Committees (internal)

- College Knowledge Transfer Award Bid leader (2010).
- Member of Departmental Research Strategy and Reviewers Committee (2009 -).
- Imperial College Imaging Sciences Strategy Committee (2012 -).

Teaching

- Head of Inorganic Teaching (2004-2006).
- Core UG lecturing, examining (written, oral), tutorials, demonstrating.
Lectures: Atomic Structure (Yr 1), (2005-2015); Organometallic Chemistry (Yr 2), (2016 -); Molecular Imaging (Yr 4), (2011 -); Lanthanide and Actinides (Yr 3), (2006-2012); Chemistry of Macrocycles (Yr 3), (2002-2006); Coordination Chemistry (Yr 1), (1998-2003).
- External Examiner – UG Chemistry degree programmes at Hong Kong University (2016-2020).
- External Examiner – UG Chemistry degree programmes at Lancaster University (2015-2019).
- External Examiner – UG Chemistry degree programmes at University of Cardiff (2010-2013).
- External Examiner – UG Chemistry degree programmes at Queens University Belfast (2009-2012).
- External Examiner – UG Chemistry degree programmes at University College, Cork (2008-2010).
- Department Academic Advisor – Hong Kong PolyU (2015-2021)
- External Examiner – PG degree programme at Queen Mary College, London (2010-2012).
- External Examiner – PhD (over 60 since 2010, in UK, Europe and Asia).

Plenary, Keynote and Invited Lectures

- **Plenary (21), Keynote (49), Invited (117)** lectures in career. A range of conference and departmental seminars worldwide, recent examples include:-
- International Conferences
2019: Cancer 19, 15th International Meeting, Hong Kong, 19 November (Keynote); 5th RSC Dalton Division Southern Regional Meeting, Oxford, 18 Sept (Keynote)
2018: International Isotope Symposium, Cambridge, 3 Nov 2018 (Keynote); Society of German Young Chemists, Spring Symposium, Konstanz, Germany, 21-23 March (Plenary); Anglo-China Symposium on Frontiers of Inorganic Chemistry, Hong Kong, 14-16 May (Keynote).
2017: Le Studium International Meeting, Orleans, France, 11-13 December (Keynote, *illness prevented travel*).
2016: International Conference on Coordination Chemistry (ICCC36), Brest, France, 3-8 July (Invited); International Conference on Imaging and Catalysis, Hong Kong, 15 Nov (Plenary); Phosphor Safari: International Symposium on Luminescence, Spectroscopy and Applications, Hong Kong, 28 Nov-1 Dec (Keynote).
2015: 13th International Ferrocene Symposium, Leipzig, 22-24 Feb (Plenary); International Conference on Science, Technology and Applications of Rare Earths (STAR 2015), Kerala, India, 23-25 April (Plenary); 5th Asian Coordination Chemistry Conference, Hong Kong, 12-15 July (Invited and Session Chair); International Conference on Catalysis, Prague, 2-4 Nov (Plenary).
2014: International Conference on Coordination Chemistry (ICCC35), Singapore, 20-25 July (Invited and Session Organiser and Chair); REAXYS from Graduation to Innovation Symposium, Chemnitz, Germany 24 June (Plenary).
2013: International Imaging Symposium, Hong Kong, 26-27 March (Keynote); Asian Chemistry Conference, Singapore, 18-23 July (Invited, and Session Organiser and Chair).
- International and National Universities
2019: Northwestern Polytechnic University, Xi'an (April), Peking University (April).
2018: Medicines Discovery Catapult (June), International Iberian Nanotechnology Laboratory, Braga (July).
2017: Reading (June), Peking University Graduate School Shenzhen (July), Imperial College (Oct), Sultan Qaboos University, Oman (Oct), South China Technical University and Sun-Yat Sen University, China (Nov), Hong Kong University (Nov).

2016: Hong Kong PolyU (Jan), Fudan University, China School of Pharmacy (May), Institute of Chemical Technology, Prague (Nov).

2015: Fudan University, China, School of Chemistry (May); Fudan University, China, School of Pharmacy (May); Hong Kong Baptist University (July), King's College London (Nov).

2014: Oxford (Feb); Leeds (March); Oxford Cancer Institute, Churchill Hospital (May).

2013: BP – Industrial (March); Hong Kong Chinese University (Aug); Hong Kong City University (Aug); Bristol (Oct); Hull (Nov); University of Oman (Dec).

Outreach and Media

Long-standing interest in outreach and school liaison activities.

- Over 20 schools lectures since 2010, including Harrow College (*The Lord Rayleigh Lecturer 2016*), Bradfield College (*The Ryde Lecturer 2017*).
- Supervised Nuffield Summer Project 6th Form Student, Hattie Jones, won best 'Big Bang UK Young Scientist', 2010.
- Media stories based on our **cyclic oligomeric ferrocenes** work – an ACS Molecule of the Year 2016.
<http://yearinreview.cenmag.org/molecules-of-the-year/> - C&EN (print issue: 2016-12-19).
<http://www.rsc.org/chemistryworld/2016/06/ferrocene-ring-oligomers-come-full-circle> - Chemistry World.
<http://cen.acs.org/articles/94/i27/Presenting-ferrocene-Ferris-wheel.html> - C&EN (print issue: 2016-07-04).
<http://www.nature.com/nchem/journal/v8/n9/covers/index.html> Journal front cover (*Nat. Chem.*, **8**, 2016).
<http://www.nature.com/nchem/journal/v8/n9/full/nchem.2584.html> News and Views (*Nat. Chem.*, **8**, 819, 2016).
- Media stories based on our work on **self-assembling nanoparticles** that target tumours
http://www3.imperial.ac.uk/newsandeventspggrp/imperialcollege/newssummary/news_16-7-2014-10-0-13;
<http://www.laboratorytalk.com/home/features/small-and-mighty/406897.article>;
<http://www.materialstoday.com/materials-chemistry/news/nanoparticles-could-improve-cancer-survival/>
- Media story based on our BHF-funded and patented work on **HO-1 probes**
<https://www.imperial.ac.uk/news/220833/cardiovascular-disease-could-diagnosed-earlier-with/>