Professor James Tucker BSc, PhD

EPSRC Leadership Fellow
Professor of Supramolecular Chemistry

School of Chemistry (/schools/chemistry/index.aspx)

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About

Jim Tucker is a Professor of Supramolecular Chemistry and is currently an EPSRC Leadership Fellow (2009-2014).

He runs an active research group focused on the design and study of supramolecular systems and functional DNA-based assemblies. For more information on his research, please visit his **group website (http://chemweb.bham.ac.uk/~tuckerj)** .

Qualifications

- PhD in Chemistry 1993, King's College London
- BSc in Chemistry 1989, King's College London
- Member of the Royal Society of Chemistry (MRSC)

Biography

After completing his PhD at King's College London in 1993, Jim undertook two postdoctoral fellowships, firstly in Prof Eiichi Kimura's group in Hiroshima University, Japan (1993-4) and then in Nobel Prize winner Prof. Jean-Marie Lehn's group at the Université Louis Pasteur in Strasbourg, France (1994-5).

In 1995, he returned to the UK to take up a Lectureship in Inorganic Chemistry at the University of Exeter. In 2005, Jim moved to the University of Birmingham and in 2009 commenced his EPSRC Leadership Fellowship, which will run until 2014.

Teaching

Teaching Programmes

- Supramolecular Devices (MSci Chemistry 4th year course)

Postgraduate supervision

Jim has an active research group. For a full list of available Doctoral Research opportunities, please visit our **Doctoral Research programme listings (http://www.bham.findaphd.com/?es=y&apl=y&aplt=&show)** .

Research

Research Themes

- DNA synthesis and DNA sensing
- Supramolecular chemistry
- Ferrocene and anthracene chemistry
- Molecular motion
- Chiral sensors

Research Activity

Research in the Tucker group is focused primarily on the design and study of functional supramolecular and DNA-based systems, which often contain redox-active or photo-active sub-units. Students and postdocs receive training in a variety of techniques, including molecular synthesis, DNA synthesis, fluorescence spectroscopy and electrochemistry.

For more information on current projects, many of which involve collaborations with research groups in the UK and abroad, please visit the **group website. (http://chemweb.bham.ac.uk/~tuckerj/Jim_Tucker_research_group_web_page/Welcome.html)**

Other activities

- EPSRC Peer Review College member (since 1998)
- Member of the Royal Society of Chemistry
- Member of Allocation Panel for the National Crystallography Service (NCS)

- Member of the Editorial Advisory Board of **Chem. Soc. Rev.**

Publications

Giordano, L., Hoang, C.T., Shipman, M., Tucker, J.H.R., Walsh, T.R. (2011), Aziridine Scaffolds for the Detection and Quantification of Hydrogen-Bonding Interactions through Transition-State Stabilization., **Angew. Chem. Int. Ed.**, 50: 741.

Mirri, G., Bull, S.D., Horton, P.N., James, T.D., Male, L., Tucker, J.H.R. (**2010), Electrochemical method for the determination of enantiomeric excess of binol using redox-active boronic acids as chiral sensors (http://pubs.acs.org/doi/full/10.1021/ja103462x) , *J. Am. Chem. Soc.,132*: 8903.**, ,: 8903.

Bedford, R.B., Betham, M., Butts, C.P., Coles, S.J., Hursthouse, M.B., Scully, P.N., Tucker, J.H.R., Wilkie, J., Willener, Y. (**2008), Anion complexation via C-H...X interactions using a palladacyclic receptor (http://pubs.rsc.org/en/Content/ArticleLanding/2008/CC/b801823e) , *Chem. Commun.,*2429.**, , 2429.

Moran, N., Bassani, D.M., Desvergne, J.-P., Keiper, S., Lowden, P.A.S., Vyle, J.S., Tucker J.H.R. (2006), **Detection of a single DNA base-pair mismatch using an anthracene-tagged fluorescent probe (http://pubs.rsc.org/en/Content/ArticleLanding/2006/CC/b611650g)** ,***Chem. Commun.,****5003*5003.

Molard,Y., Bassani, D.M., Desvergne, J.-P., Horton, P.N., Hursthouse, M.B., Tucker J.H.R. (2005),***Photorelease of an organic molecule in solution: Light-triggered blockage of a hydrogen-bonding receptor site (http://onlinelibrary.wiley.com/doi/10.1002/anie.200461946/abstract)*** . ***Angew. Chem. Int. Ed****.,44: 1072.* ,: 1072

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