

Prof Graeme R. Hanson, PhD, FRACI

Centre for Advanced Imaging
The University of Queensland, Queensland, Australia

Research Interests

Through a unique synergistic approach involving both theoretical and experimental aspects of continuous wave and pulsed EPR spectroscopy I have undertaken the geometric and electronic structural characterisation of the metal binding sites in metalloproteins and transition metal ion complexes. The development of computer simulation software suites (XSophe-Sophe-XeprView, Molecular Sophe, and iResonanz) has and will continue to ensure that my group at UQ is the world leader in this area and their application to the characterization of active sites in metalloenzymes, model transition metal ion complexes and metallo-drugs has provided many ground-breaking and novel insights into their reactivity.

I have published 140 scholarly articles in internationally recognized journals or book series, presented 170 papers at various scientific conferences and have 5 patent applications arising from the development of the XSophe-Sophe-XeprView computer simulation software suite, 32 book reports, software manuals and other publications. Recently, I co-edited two volumes of Biological Magnetic Resonance (vols, 28, 29) entitled High Resolution EPR: Applications to Metalloenzymes and Metals in Medicine and Metals in Biology: Applications of High Resolution EPR to Metalloenzymes.

I have been invited to speak at a large number of international conferences, including the Joint Euromar and 17th ISMAR Conference (2010), EPR 2010, ASBIC-5 (2010), ICBIC-14 (2009), COST P15 (2008 and 2009). I have received a significant funding through peer reviewed competitive research grants and commercial funding to allow me to undertake my research interests.

Positions

I am currently a Professorial Research Fellow and Group Leader for Structural Chemistry and Biology and Computational and Data Analysis in the Centre for Advanced Imaging at the The University of Queensland and from 2007-2011 I have been Treasurer of the Society of Biological Inorganic Chemistry. Previously I was Vice President of the Asia Pacific EPR Society, Associate Editor, Applied Magnetic Resonance, Director and Treasurer, Australian and New Zealand Magnetic Resonance Society and Regional Treasurer of the International EPR Society. Through these various elected positions I have contributed to the ongoing development of the research fields through support of conferences, workshops and student travel awards.

I have been Chair or co-Chair of EPR-95, the International Conference on Biological Inorganic Chemistry, 2003, Asia Pacific EPR Symposium, 2008 and been involved on Program Committees on many conferences organized by the Australian and New Zealand Magnetic Resonance Society and recently the International Conference on Magnetic Resonance in Biological Systems.

Memberships

Society for Biological Inorganic Chemistry (1995-),
Asia Pacific EPR Society (1999-),
Australian and New Zealand Magnetic Resonance Society (1995-),
International Society for Magnetic Resonance (1995-),
Royal Australian Chemical Institute (1980-)

Honors

Royal Australian Chemical Institute, Schools Lecturer, 2002
Elected Fellow, Royal Australian Chemical Institute (2005)
German Chemical Society Lecturer (2008)