Dr Neil V Rees BA(Hons), DPhil, MRSC

Lecturer in fuel cell research

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About

Neil Rees is a lecturer in fuel cell research within the Centre for Hydrogen Energy and Fuel Cell Research in the School of Chemical Engineering.

Neil has published over 80 scientific articles in journals and books, and has wide-ranging research interests in fundamental and applied electrochemistry with particular focus on nanoelectrochemistry.

Qualifications

- DPhil in Electrochemistry 2004
- BA(Hons) Chemistry 1995

Biography

Neil Rees qualified with a BA(Hons) in Chemistry from Oxford University in 1995. After a short career in finance as a chartered accountant and chartered tax consultant, he returned to Oxford in 2001 and obtained his DPhil in Electrochemistry in 2004.

Postdoctoral research at Cardiff University into in-situ electrochemical SERS (Prof. G.A. Attard) and Oxford (Prof. R.G. Compton) followed until his appointment at Birmingham in Summer 2012.

Research

Research Themes

- Nanoelectrochemistry
- Hydrodynamic electrochemistry
- Charge transfer kinetics

Publications

Some recent publications include:

Kahk J.M., Rees N.V., Pillay J., Vilakazi S., Tshikhudo R., Compton R.G., (2012). **Electron transfer kinetics at single nanoparticles, Nano Today 7:174-179 (http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=6&SID=T2L457Imi6Np5NjnpPp&page=1&doc=3)**

Stuart E.J.E, Zhou Y-G., Rees N.V., Compton R.G. (2012).**Determining unknown concentrations of nanoparticles: the particle-impact electrochemistry of nickel and silver. RSC Adv. 2:6879-6884 (http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=6&SID=T2L457Imi6Np5NjnpPp&page=2&doc=11)** . 2:6879-6884

Zhou Y-G., Rees N.V., Compton R.G. (2012). **The electrochemical detection of tagged nanoparticles via particle-electrode collisions: nanoelectroanalysis beyond immobilisation Chem. Commun. 48:2510-2512 (http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=6&SID=T2L457Imi6Np5NjnpPp&page=2&doc=12)**

Zhou Y-G., Rees N.V., Compton R.G. (2012). **Making contact: charge transfer during particle-electrode collisions. RSC Adv. 2:379-384 (http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=6&SID=T2L457Imi6Np5NjnpPp&page=2&doc=14)**

Zhou Y-G., Rees N.V., Pillay J., Vilakazi S., Tshikhudo R., Compton R.G., (2012). **Gold nanoparticles show electroactivity: counting and sorting nanoparticles upon impact with electrodes (http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=6&SID=T2L457Imi6Np5NjnpPp&page=2&doc=15&cacheurlFromRightClick=no)** **Chem. Commun**. 48:224-226

Rees N.V., Compton R.G. (2011). **Sustainable energy: a review of formic acid electrochemical fuel cells. J. Solid State Electrochem. 15:2095-2100. (http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=6&SID=T2L457Imi6Np5NjnpPp&page=2&doc=18)**

Rees N.V., Compton R.G. (2011).**Carbon-free energy: a review of ammonia- and hydrazine-based electrochemical fuel cells. Energy Environ. Sci. 4:1255-1260 (http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=6&SID=T2L457Imi6Np5NjnpPp&page=3&doc=24)**

Rees N.V., Compton R.G. (2011). **Electrochemical CO_2 sequestration in ionic liquids; a perspective. Energy Environ. Sci. 4:403-408 (http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=6&SID=T2L457Imi6Np5NjnpPp&page=3&doc=26)**

Zhou Y-G., Rees N.V., Compton R.G. (2011).**The Electrochemical Detection and Characterization of Silver Nanoparticles in Aqueous Solution. Angew. Chem. Int. Ed. 50:4219-4221 (http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=6&SID=T2L457Imi6Np5NjnpPp&page=3&doc=28)**

Rees N.V., Compton R.G. (2010). **Voltammetry as a probe of displacement. Chem. Commun. 46:4238-4248 (http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=6&SID=T2L457lmi6Np5NjnpPp&page=4&doc=35)**

Rees N.V., Matthews S.M., Yunus K., Fisher A.C., Compton R.G. (2009). **A Method for the Positioning and Tracking of Small Moving Particles. Angew. Chem. Int. Ed. 48:2376-2378 (http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=6&SID=T2L457lmi6Np5NjnpPp&page=5&doc=45)**

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