

Curriculum Vitae - Dr Tim Albrecht



RESEARCH INTERESTS:

Electrochemistry at the nanoscale; single-molecule charge transport; quantum interference and (molecular) thermoelectrics; tunnelling-based biosensing and sequencing; machine learning for single-molecule data analysis; solid-state nanopores and nanopipettes, in particular with integrated electrode structures and custom-built high-speed electronics; transport in porous media; ionic liquids

WHY AM I RUNNING FOR ISE SECRETARY GENERAL?

A member of the ISE since my days as PhD student, I have always felt very strongly about the Society and the electrochemical community it represents. As ISE UK Regional Representative (2011-2016) and as Chair of the Royal Society of Chemistry Electrochemistry Group (since 2014), the second-largest Interest Group in the RSC with ~650 members, I have gained significant experience in senior managerial and coordinating roles, which included scientific strategy, policy, and interactions with major stakeholders. These are key tasks for the Secretary General and, with your support, I would be delighted to help the Society in this capacity, to continue to grow and flourish in the years to come.

WORK EXPERIENCE

Sept 2017 onwards	Professor of Physical Chemistry, University of Birmingham
Aug 2014 - Aug 2017	Reader, Imperial College London
Aug 2011 - July 2014	Senior Lecturer, Imperial College London
Oct 2006 - July 2011	Lecturer, Imperial College London
Nov 2003 - Sep 2006	Postdoctoral Researcher, Prof. J. Ulstrup, Group of Bioinorganic Chemistry, Technical University of Denmark (DTU)
September/October 2003	Staff Scientist, Max-Volmer Biophysical Chemistry, Technical University of Berlin, Germany

EDUCATION AND TRAINING

September 2003	PhD from the Technical University of Berlin and MPI for Bioinorganic Chemistry, Muelheim, Germany
01/98-03/00 & 01/01-03/03	Fellow of the German Academic Foundation ("Studienstiftung des deutschen Volkes")
October 1995 - March 2000	Chemistry studies, University of Duisburg/Essen, Germany

AWARDS

Fellow of Royal Society of Chemistry (2017); Wellcome Trust Value-in-People Award for a Visiting Professorship at TU Delft (Kavli Institute for Nanoscience, C. Dekker group), June - August 2014; John-Albery Memorial Lecture at UK Electrochem 2014; ISE Tajima Award 2013; Lecture at Imperial College's 'Education Day' 2010, on innovative concepts for teaching in Nanoscience

MANAGERIAL FUNCTIONS, INDUSTRIAL RELATIONS, AND SERVICE TO THE COMMUNITY

UK Regional Representative to the ISE (2011-2016); Chair of the UK RSC Electrochemistry Group and their representative at the International Society of Electrochemistry (ISE), since 2014; Director of Postgraduate Studies, Department of Chemistry (04/2012 - 09/2016); Member of the Centre for Plastic Electronics and Executive Committee Member of the London Centre for Nanotechnology at Imperial College; industrial collaborations include Agilent (now Keysight), Nanomeasurements Division and Agilent Research Santa Rosa, Rio Tinto (mineral leaching), Shell ('Digital Rocks' Project) and Siemens Corporate Technology in Erlangen/Germany.

RESEARCH GROUP (CURRENT): 2 Postdocs, 7 PhD students and between 2-4 undergraduates

PROFESSIONAL MEMBERSHIPS

International Society of Electrochemistry; Royal Society of Chemistry

COMMISSIONS OF TRUST, ASSESSMENT PANELS AND EDITORIAL WORK

Editorial Board Member, Nature Scientific Reports (Chemical Physics section); Member of review panels for the Portuguese, Dutch, Belgian, Irish, Swiss and UK National Science Foundations (or equivalent) as well as the EU; University review panels, e.g. for the provision of postgraduate training in the Imperial Business School

MOST RECENT PUBLICATIONS (PEER-REVIEWED):

(FULL LIST: <http://scholar.google.com/citations?user=LBvyV1gAAAAJ>)

LE Wilson, C Hassenrück, RF Winter, AJP White, **T Albrecht**, NJ Long, "Ferrocene- and Biferrocene-Containing Macrocycles towards Single-Molecule Electronics", *Angew. Chem.* 2017 (accepted)

S. di Lecce, **T. Albrecht**, F. Bresme, "The role of ion-water interactions in determining the Soret coefficient of LiCl aqueous solutions", *Phys. Chem. Chem. Phys.* 2017,19, 9575-9583.

S. di Lecce, **T. Albrecht**, F. Bresme, "A computational approach to calculate the heat of transport of aqueous solutions", *Sci. Rep.* 2017, 7, 44833.

LE Wilson, C Hassenrück, RF Winter, AJP White, **T Albrecht**, NJ Long, "Functionalised Biferrocene Systems towards Molecular Electronics", *Eur. J. Inorg. Chem.* 2017, 2, 496-504.

S Bock et al., "Single-Molecule Conductance Studies of Organometallic Complexes Bearing 3-Thienyl Contacting Groups", *Chem. Eur. J.* 2016, DOI: 10.1002/chem.201604565.

RL Fraccari, M Carminati, G Piantanida, T Leontidou, G Ferrari, **T Albrecht**, "High-bandwidth detection of short DNA in nanopipettes", *Faraday Discuss.* 2016, 193, 459-470.

M Lemmer, MS Inkpen, K Kornysheva, NJ Long, **T Albrecht**, "Unsupervised Vector-based Classification of Single-Molecule Charge Transport Data", *Nat. Commun.* 2016, 7, 12922.

L Qiao, A Shougee, **T Albrecht**, K Fobelets, "Oxide-coated silicon nanowire array capacitor electrodes in room temperature ionic liquid", *Electrochim. Acta* 2016, 210, 32-37.

MS Inkpen, S Scheerer, M Linseis, AJP White, RF Winter, **T Albrecht**, NJ Long, "Oligomeric ferrocene rings", *Nat. Chem.* 2016, 8, 825-830.

RL Fraccari, A Bahrami, P Ciccarella, M Carminati, M Sampietro, G Ferrari, **T Albrecht**, "High-speed detection of DNA Translocation in Nanopipettes and a New Model for the DNA Length Dependence", *Nanoscale* 2016, 8, 7604-7611.