CURRICULUM VITAE — Guy DENUAULT

Born in France, Guy Denuault lives in the UK since 1986. He also lived for a year in Texas while working at the University of Austin and for 10 months in Germany while working at the University of Oldenburg. He started his academic career as an EPSRC advanced research fellow and is now an Associate Professor in the Southampton Electrochemistry Group where he runs the Southampton Electrochemistry Summer School.

Degrees

- PhD, University of Southampton, UK, 1989.
- Maîtrise de Sciences et Techniques, University of Bordeaux, France, 1985.
- Diplôme Universitaire de Technologie, University of Reims, France, 1983.

Appointments

- Associate Professor of Electrochemistry, 2014-, Senior Lecturer, 2000-2014, Lecturer, 1993-2000, University of Southampton.
- Fellow of the Hanse-Advanced Study Institute & Visiting Professor, University of Oldenburg, 2010-2012.
- Visiting professor, National Polytechnic Institute of Grenoble, 2006, University of Bordeaux, 1999, University of São Paolo, 1998, 2015-16.
- EPSRC Advanced Research Fellow, University of Southampton, 1991-1996.
- Postdoctoral fellow with A.J. Bard, University of Texas at Austin, 1989-1990.

Teaching & administration

- Director of MSc programmes since 2014. Head of Teaching for Physical Chemistry, 2002-2007. Chemistry Exams Officer, 2004-2010.
- Lecturer of physical chemistry & electrochemistry for over 25 years at undergraduate & postgraduate levels.
- External examiner: Bath, Bordeaux, Brunel, Cork, Grenoble, Imperial College, Newcastle, Nottingham, Oxford, Paris, Reading, Sonderborg, Trondheim, University College London (PhDs), Newcastle, Nottingham (MPhils), Reading (MSc), Grenoble, Nancy (Habilitation).

Research

- *Development, applications & theory of electroanalytical techniques*: Micro & Nanoelectrodes, Scanning ElectroChemical Microscopy (SECM), micro-electrochemical sensors (deep sea oxygen profiling, pH sensing). *Templated electrodeposition:* Fabrication of nanostructured films with molecular & colloidal templates. *Numerical simulations of electrode processes:* microelectrodes, SECM, batteries, templated electrodeposition.
- Author / co-author of over 80 publications including 9 book chapters. *h*-index of 28. Res.ID: B-8269-2009, OrcidID: 0000-0002-8630-949.
- Research supervisor: 26 PhDs, 1 MPhil, 2 MRes successfully completed.
- UK representative for the International Society of Electrochemistry since 2017. Secretary of the RSC Electrochemistry Group, 1995-2000.
- Organiser of the 2nd International Conference on SECM. Organiser of symposia at UK and international conferences.

Selected conference participations from his group

- 2019, 10th SECM workshop (1 invited lecture). Electrochem2019, (1 keynote lecture).
- 2018, ECS fall meeting (1 lecture). 69th ISE meeting (1 lecture+3 posters). Electrochem2018 (1 lecture).
- 2017, Mexican Society of Electrochemistry (1 plenary+2 lectures). 9th SECM workshop (1 poster). 231st ECS meeting (1 lecture+1 poster).
- 2016, 67th ISE meeting (2 lectures+1 poster). ElecNano7 (1 lecture). 31st Mexican electrochemical society meeting (1 lecture).
- 2015, 8th SECM workshop (keynote). 66th ISE meeting (2 lectures+1 poster).
- 2014, 65th ISE meeting (1 lecture+1 poster). Spring ISE meeting (1 lecture+1 poster). ESEAC 2014 (1 lecture).
- 2013, 7th SECM workshop (1 invited lecture+1 lecture).
- 2012, International Symposium on Electrocatalysis (1 invited lecture). 63rd ISE meeting (1 poster).
- 2011, 62nd ISE meeting (1 keynote).

Organisation & delivery of research & continuous professional development courses

- Organiser of the Southampton Electrochemistry Summer School.
- Lecturer at Summer Schools in Argentina (2000), China (2009 & 2012), Brazil (2013 & 2015).
- Postgraduate courses in Brazil (1998, 2013, 2015 & 2017), Argentina (1997), Switzerland (1993), Singapore (2011).

Selected publications

- Generation and in situ electrochemical detection of transient nanobubbles. *J. Phys. Chem. C*, 124, 2020, 7544-7549.
- Solid molybdenum nitride microdisc electrodes: …application to the reduction of peroxodisulfate, *Electrochim. Acta*, 293, 2019, 184-190.
- An analytical differential resistance pulse system…application in Coulter Counting. *ACS Sensors*, 4, 2019, 2190-2195.
- The in situ electrochemical detection of microbubble oscillations during motion through a channel. *PCCP*, 21, 2019, 24802-24807.
- Electrochemical analysis of nanostructured iron oxides using cyclic voltammetry & SECM, *Electrochim. Acta*, 222, 2016, 1326-1334.
- Sampled-current voltammetry at microdisk electrodes: kinetic information from…voltammograms. *Anal. Chem.*, 86, 2014, 9917-9923.
- Nanostructured Pd hydride microelectrodes: in situ monitoring of pH Variations in a porous medium. *Anal. Chem.*, 86, 2014, 5758-5765.
- Using the potentiometric mode of SECM to study the mixed potential…redox processes, *Anal. Chem.*, 85, 2013, 8341-8346.
- Electrodeposition of highly ordered macroporous iridium oxide…colloidal templates. *J. Materials Chem.* 19, 2009, 3855-3858.
- Electrochemical techniques and sensors for ocean research. *Ocean Sci.*, 5, 2009, 697-710.
- Development of a reliable microelectrode dissolved oxygen sensor. *Sensors & Actuators B: Chem.* 123, 2007, 344-351.
- Fabrication and characterisation of nanostructured Pd hydride pH microelectrodes. *Anal. Chem.*, 78, 2006, 265-271.
- Detection of hydrogen peroxide at mesoporous platinum microelectrodes. *Anal. Chem.* 74, 2002, 1322-1326.
- Detection of hydroxide ions in aqueous solutions by steady state voltammetry. *Electroanalysis*, 13, 2001, 289-294.
- Direct Determination of Diffusion Coefficients by Chronoamperometry at Microdisk Electrodes. *J. Electroanal. Chem.*, 308, 1991, 27 38.
- Scanning electrochemical microscopy: a new technique for the characterization…of surfaces. *Acc. Chem. Res.*, 23, 1990, 357 363.

Electrochemistry
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I am honoured to be nominated to serve the ISE as Chair Elect of Division 1. My first ISE experience was in 1988 when I attended the annual meeting in Glasgow during my PhD. It was my first participation at a large international conference and I have fond memories of that week. I was determined to put a face to many authors and I remember rushing between symposia to sit in the lectures of leading electrochemists. Incidentally, I subsequently read the published literature with a more critical eye. Since then, I have strived to participate and send my students to ISE meetings. I have particularly enjoyed the way the Society has been run over the last fifteen years and I have really appreciated the streamlined organisation of its meetings. A few years ago, I felt it was time to give back to the ISE and became the UK regional representative for the Society. In November 2019, I was reappointed to this position for the period 2020-2022.

I am now ready to take on a more leading role within the Society and very grateful to be nominated for the election of Division 1 chair. As required by the Society regulations, I shall relinquish my current position of Regional Representative if my candidacy is successful.

With its emphasis on Analytical Electrochemistry, Division 1, is a clear choice for me. From my PhD years onwards, my research interests have focused on the development, theory and applications of electroanalytical techniques, especially those involving microelectrodes and scanning electrochemical microscopy. I am particularly motivated by the challenges that arise when taking electrochemical methods from the lab to the real world. If elected, I shall propose the Division should organise a symposium entitled "*Electroanalytical techniques from the lab to the field: pitfalls and challenges*". This could be an annual Division 1 symposium or a Division 1 sponsored symposium, e.g. at a Topical Meeting.

Past and present Division 1 chairs have made a very good job of running the Division and have organised and sponsored very successful symposia. I look forward to continuing the promotion of Analytical Electrochemistry, both its fundamental and applied aspects, within the electrochemistry community.

Guy Denuault,

Southampton 13 June 2020.

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