

Curriculum Vitae

Thomas Maschmeyer, FAA FTSE FRACI(CCHEM)
ARC FUTURE FELLOW

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Dr. Thomas Maschmeyer, is Professor of Chemistry and ARC Future Fellow at the University of Sydney and serves as Director of the Laboratory of Advanced Catalysis for Sustainability.

In 2011 he was elected Foreign Member of the Academia Europea as well as Fellow of the Australian Academy of Sciences, the Australian Academy of Technological Sciences and Engineering and the Australian Royal Chemical Institute.

He is author of 240+ publications, cited 6000+ times, including 22 patents and 22 book chapters (H-Index 41, m-value 2.3). He serves on the editorial/advisory boards of nine international journals and is President of the Catalysis Society of Australia. He received many awards, including the RACI Weickhardt Medal for Economic Contributions through Chemistry (2012), RACI Applied Research Award (2011), the Le Fèvre Prize of the Australian Academy of Sciences for outstanding basic research in chemistry by scientists under 40 (2007). He is co-founder of the Australian low carbon/renewables start-ups *Ignite Energy Resources* (2006) and *Licella* (2007), has been voted to be among the global top 100 “people in bioenergy 2011/12” (by the readers of *Biofuels Digest*, circ. 100,000), and was one of the founding Professors of *Avantium* (2001), a Dutch High-tech company, now with 100+ employees.

After completing his PhD with Assoc. Prof. Anthony F. Masters in 1994, he worked with Prof. Sir John M. Thomas at the Royal Institution of Great Britain as Australian Bicentennial Fellow and became the Assistant Director of the Davy Faraday Laboratories there in 1997, concurrently holding a research position at The University of Cambridge (in the group of Prof. B.J.G. Johnson) and was Senior Research Associate at Peterhouse. In 1998 he was appointed to Professor and Head of the Department of Applied Organic and Catalytic Chemistry at the Delft Institute of Chemical Technology, becoming Vice-Chairman of that Institute in 2000.

He returned in late 2003 to the University of Sydney as ARC Federation Fellow, where he has set up a state-of-the-art catalysis and process engineering laboratory. He also advises both the Australian Federal and the NSW State governments (up to ministerial level) and holds a number of national and international consultancies.

Education, Qualifications & Personal Information:

Date and Place of Birth: 1st October, 1966, Hamburg, Germany.
Nationality: German with Australian Permanent Residency Status.
Marital Status: Married, two children
Academic Record: Doctor of Philosophy (Science), The University of Sydney, 1995.
 Bachelor of Science (Hons. I), The University of Sydney, 1991.
 German Abitur, Hamburg, 1986.

Areas of Interest:

- Catalysis, Sustainable Processes, Renewable Feedstocks (Biomass, Solar Hydrogen), Ionic Liquids, Micro- and Mesoporous Nano-Structured Materials, Reversible Energy Storage Devices

Publication record (for metrics see: <http://www.pnas.org/cgi/reprint/0507655102v1.pdf>):

- 240+ items have been published (CAS), including 22 patents/patent applications and 22 book chapters, resulting in around 6000+ citations (ISI), an *H-Index* of 41 and an m value of 2.3 (with an overall average citation rating of 31 per journal paper).

Career Profile:

- Nov. 2009 - current ARC Professorial Future Fellow/Professor of Chemistry, The University of Sydney, School of Chemistry
- Nov. 2008 – Oct. 2009 Professor of Chemistry, The University of Sydney, School of Chemistry, Foundation Director USyd Institute of Sustainable Solutions – now part of the Charles Perkins Centre
- Nov. 2003 – Oct. 2008 ARC Federation Fellow/Professor of Chemistry, The University of Sydney, School of Chemistry
- Jan. 2001 – Nov. 2003 Vice-Chairman of the Institute of Chemical Technology, TU Delft
- Aug. 1998 – Nov. 2003 Head of The Department of Applied Organic and Catalytic Chemistry, Institute of Chemical Technology, TU Delft
- Aug. 1998 – Nov. 2003 Professor of Industrial Organic Chemistry, Institute of Chemical Technology, TU Delft
- Jan. 1996 – Aug. 1998 EU Fellow/Fellow Peterhouse, University of Cambridge
- Jan. 1996 – Aug. 1998 Assistant Director, Davy Faraday Laboratories, The Royal Institution, London
- Oct. 1994 – Dec. 1995 Australian Bicentennial Fellow and EPSRC PDRA, Davy Faraday Laboratories, The Royal Institution, London

Grants (2004 onwards):

- Competitive grants since moving back to Sydney in Nov. 2003 (A\$ 23,952,000)
 - ARC (FedF, FutF, 4xDP, 9xLIEF, 2xLinkage): \$13,208,000
 - Other government (NCRIS, CSIRO, ABRI, SIEF): \$6,396,000
 - Company (ABG, Ignite, Licella, Alpha Chem.): \$2,517,000
 - USyd: \$809,000

Awards and Prizes:

- RACI Weickhardt Medal (2012) – for Economic Contributions Through Chemistry
- Liversidge Lecture and Prize (2012) Royal Society of NSW
- Elected Fellow of the Royal Australian Chemical Institute, RACI (2011)
- RACI Applied Research Award (2011)
- Elected Fellow of the Australian Academy of Technological Science and Engineering (2011)
- Elected Foreign Member of the Academia Europea (2011)
- Elected Fellow of the Australian Academy of Science (2011)
- Australian Academy of Science, Le Fèvre Memorial Prize (2007) – for outstanding basic research in chemistry by a scientist under 40.
- University Professor, University Pierre and Marie Curie, Paris VI (2006)
- NSW Tall Poppy Award for Outstanding Contributions to Science (2004)
- Research Fellowship of the Royal Society (Oxford 1998) – not commenced
- EU Marie Curie Fellowship (personal, not institutional) (1996–98)
- Australian Bicentennial Fellowship (1994)
- George Harris Scholarship (1994), C.G. and R.J.W. Le Fèvre Prize (1993), H.B. and F.M. Gritton Scholarship (1993–94)

Membership of Professional Societies:

- Royal Australian Chemical Institute (RACI): 1989 – 1996 and 2003 – current
- Dutch Royal Society of Chemistry (KNCV): 1998 - 2004
- American Chemical Society (ACS): 2003 – current

Honorary positions, external committees, consultancies (selection)

- *Directorships:*
 - Non-exec. Director of Ignite Energy Resources Ltd (2009 – 2010)
 - Non-exec. Director of Ignite Energy Pty Ltd (2006 – 2010)
 - One of the two Founding Directors of the University of Sydney Institute of Sustainable Solutions, USSS – now renamed ISSUS
 - Non-exec. Director of The Australian Biodiesel Group – an ASX-listed company (2008)
 - Founding Director of the USyd Laboratory of Advanced Catalysis for Sustainability

- *Government scientific advisor:*
 - Australian Biofuels Research Institute, ABRI, DRET (2011)
 - National Steering Group on Biofuels, RIRDC (2009–10)
 - NSW Premier's E10 Taskforce (2007)
 - Dutch Ministry of Finance (2001)

- *Current editorial and/or advisory board member:*
 1. Journal of Energy Chemistry *Elsevier* (since 2013)
 2. ChemPlusChem, *VCH-Wiley* (since 2011)
 3. Catalysis Surveys of Asia, *Springer* (since 2010)
 4. Zeitschrift der Allgemeinen und Anorganischen Chemie, *VCH-Wiley* (since 2009)
 5. Chemical Catalysis – Catalytic Chemistry (ChemCatChem), *VCH-Wiley* (since 2009)
 6. Topics in Catalysis, *Springer* (since 2002)
 7. Catalysis Letters, *Springer* (since 2001)
 8. Research in Chemical Intermediates, *Springer* (since 2001)
 9. Current Opinion in Solid State Science, *Elsevier* (since 1996)
 - Guest-Editor of Topics in Catalysis 'Catalytic Membrane Reactors', *Springer* (2004)

- *Board member/ secretary of learned societies:*
 - President of the Catalysis Society of Australia (2008 – current)
 - NIOK (Dutch Research School of Catalysis)
 - Research Committee (2002–03)
 - Board (1998–2003)
 - KNCV (Royal Dutch Chemical Society) Catalysis Division (1999–2003), secretary
 - Dutch Zeolite Association (1998–2003)

- *Consultancies:*
 - Ignite Energy Resources Ltd (2009 – current)
 - Alpha Chemicals (2010 – 2011)
 - Licella Pty Ltd (2008 – current)
 - Ignite Energy Pty Ltd (2007 – 2009)
 - Australian Biodiesel Group (2004 – 2007)
 - Avantium B.V. (1999 – 2002)
 - Cambridge Reactor Design Pty Ltd. (1996 – 2002)
 - DSM Research B.V. (2001 – 03)
 - Cambridge Combinatorial Pty. Ltd. (1996 – 1998)
 - Borax (1996 – 1998)
 - Shell Chemicals, KSLA/STCA (1996 – 2004)

Selection of Plenary/Keynote/Invited Lectures (excluding standard oral presentations):

- Plenary: “*Low Carbon Technologies: From Brown Coal and Biomass to Solar Hydrogen*”, Liversidge (named) Lecture, 19/11/12, Sydney.
- Plenary: “*From Biomass To Fuels And Chemicals With Hydrothermal Treatments*”, CSIRO Cutting Edge Symposium on Chemical/Biological Conversion of Renewables to Biofuels and Bioproducts, 13-5/11/12, Melbourne.
- Invited: “*Syntheses of MoS₂ Nanostructures in Ionic Liquid Media and their Application as HER Electrocatalysts*”, International Conference on Emerging Advanced Nanomaterials, 22 – 25/10/12, Brisbane.

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- Invited: “*Current and Future Maritime Fuels*”, Sustainable Maritime Fuels Symposium at PACIFIC 2012, 31/01/12, Sydney.
 - Invited: “*Designing Nanostructures for Catalysis - Surfaces, Delamination and Intergrowths*”, Green Chemistry Innovations 2011, 3rd Asia-Oceania Conference on Green and Sustainable Chemistry, 7th December 2011, Melbourne.
 - Invited: “*From Biomass and Lignite to Crude Oil Replacements and “Drop-in” Transportation Fuel — Towards Commercial Demonstration*”, CHEMECA, Sydney, 18-21/09/11.
 - Keynote: “*Drop-in Transportation Fuel — Towards Commercial Demonstration*”, Science for our Nation's Energy Future EFRC Summit and Forum, Department of Energy, Washington DC, USA, 25-27/05/11.
 - Invited: “*From Biomass and Lignite to Crude Oil Replacements and “Drop-in” Transportation Fuel — Towards Commercial Demonstration*”, Inaugural International Conference on Clean Energy, Royal Society of Chemistry/Chinese Academy of Sciences, Dalian, China, 11-15/04/11.
 - Plenary: “*Chemistry at the Interface of Soft and Hard Matter*”, New Trends in Nanochemistry Symposium at the Max-Planck-Institute, Stuttgart, 21/06/10.
 - Plenary: “*New Catalysts for the Hydrogen Evolution Reaction*”, IACS Conference on the Frontiers of Catalytic Science and Technology for the 21st Century, Dalian, China, 3-6/06/10.
 - Plenary: “*Sustainable Energy – From Solar Hydrogen to Biofuels*”, IDECAT, Le Porquerolles, France, 11-16/05/10.
 - Plenary: “*Non-Innocent Surfaces*” Gordon Conference, Oxford, UK, 24/8/09 – 30/8/09.
 - Invited: “*Hierarchically structured composite materials for the photocatalytic splitting of water with visible light*”, 14th ICC, Seoul, South Korea 13-18/07/08.
 - Invited: “*Designing active sites for surfaces: from tightly bound to loosely anchored, photocatalytic splitting of water with visible light*”, The Royal Society of Chemistry, International Symposium “Turning Points in Solid-State, Materials, and Surface Science” in honour of Prof. Sir John Meurig Thomas’ 75th birthday, Cambridge, UK, 13–15/12/07.
 - Invited: “*The Interplay between bromide and cerium(IV) in the oxidation of 4-t-butyltoluene and the bromination of phenol red*”, International Symposium on Catalysis Engineering on the occasion of Prof. Jacob Moulijn’s retirement, Delft, Netherlands, 06/07.
 - Plenary: “*Active Site Design for Heterogeneous Catalysts*”, ACENET Conference, Bari, Italy, 24-29/06/07.
 - Key-note: “*Nanoreactors in cascade reactions*”, RACI Inorganic Conference, Hobart, Australia, 4-8/02/07.
 - Invited: “*Compartmentalized nanoreactors and dynamic kinetic resolutions*”, APCAT-IV, Singapore, 6-8/12/06.
 - Key-note: “*Strategies for homogeneous catalyst immobilisation*”, ISHHC-XII, Florence; Italy, 18-22/07/05.
 - Invited: “*Membrane catalytic reactors for processing small molecules*”, Discussion Meeting ‘Catalysis in chemistry and biochemistry’, The Royal Society, 14-15/06/04.
 - Key-note: “*Nanoparticles Supported in Mesoporous Hosts*”, 4th International Mesoporous Materials Symposium, Cape Town, South Africa, 1–4/05/04
 - Invited: “*Assembled catalysts – just Interesting or maybe important?*”, The Royal Society of Chemistry, International Symposium, “Perspectives and prospects in catalytic science” in honour of Prof. Sir John Meurig Thomas’ 70th birthday, London, UK, 3–5/09/02.
 - Key-note: “*Parallel Approaches to the Synthesis and Testing of Catalysts*”, EuroCombiCat, Ischia, Italy, 2–5/6/02.
 - Key-note: “*Incorporation of Nano-Zeolites into Mesoporous TUD-1*”, Nanoporous Materials III, Ottawa 12–15/6/02.
 - Plenary: “*Catalytic Properties of Isomorphously Substituted Microporous Solids*”, Inaugural Euresco Conference on Isomorphous Substitution by Transition Metals, Obernai, France, 15–20/03/02
 - Key-note: “*Tailored space – designing composite catalytic materials*”, 38th IUPAC Scientific Congress ‘Frontiers in chemistry’, Brisbane, 1–6/7/01.
 - Invited: “*Serial and parallel ways to enhance and accelerate catalyst testing: Application of high-speed experimentation techniques to the study of the synthesis of silsesquioxanes and zeolites*”, NATO Advanced Study Institute on Principles and Methods for Accelerated Catalyst Design, Vilamoura, Portugal, 15–28/7/01
 - Key-note: “*Towards a working definition for the design of active sites*”, 2nd Taylor Conference, Liverpool, UK, 3–7/9/00.
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