BRADLEY P. LADEWIG

Researcher & Chemical Engineer

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EXPERIENCE

Scientist & Group Leader

Institute for Micro Process Engineering, KIT

November 2018 – Ongoing Karlsruhe, Germany

- Leading the **Photochemistry** research group
- May 2019 - Nov 2019, held an Alexander von Humboldt Research Fellowship for Experienced Researchers

Senior Lecturer in Chemical Engineering

Imperial College London

May 2015 – Nov 2018 London, UK

- Leader of personal research group with six doctoral reseachers, co-founder of the Barrer Centre
- Developed novel membrane synthesis and characterisation techniques, including for photoresponse materials
- Initiated new field of single-crystal metal organic framework membranes, for fundamental measurement of intrinsic separation properties

Associate Professor of Chemical Engineering

Monash University

Jan 2009 – May 2015 Melbourne, Australia

- Recruited as Lecturer in 2009, promoted to Senior Lecturer in 2011 and Associate Professor in 2012
- Built a research group focussed on membranes and materials for clean energy and environmental applications
- Established collaborations nationally and internationally, graduated 13 PhD students.
- Attracted more than €7m in research funding as a named investigator (Principal or Co-investigator).

Postdoctoral Research Fellow

Australian Institute of Bioengineering and Nanotechnology

Sep 2007 – Dec 2008 Brisbane, Australia

Postdoctoral Research Engineer

École nationale supèrieure des industries chimiques (ENSIC)/CNRS

Jun 2006 – Aug 2007 Nancy, France

EDUCATION

Graduate Certificate in Higher Education

Monash University

2009 – 2010

PhD in Chemical Engineering

The University of Queensland

2002 – 2006

Bachelor of Engineering (Chemical), with Honours I

The University of Queensland

1998 – 2001

SELECTED AWARDS

- 2019 Alexander von Humboldt Research Fellowship for Experienced Researchers
- 2018 President's Award for Excellence in Teaching, Imperial College London 2017 Student Academic Choice Award: Best Innovation
- 2013 VESKI Victoria Fellowship - Victorian State Government
- 2013 Shortlisted for the 2013 Global IChemE Awards - Sustainable Technology Award
- 2013 Special Commendation Vice-Chancellor's Award for Teaching Excellence - Monash University
- 2013 Deans Award for Excellence in Teaching – Monash University
- 2012 Finalist in the SACS Leadership Awards (State Government Non-Executive Category)
- 2008/09 Australian Academy of Science International Science Linkage Grant for Scientific Visits to Europe
- 2008 Australian Institute of Energy – Energy Council of Australia Travel Scholarship
- 2004 Australian Academy of Technological Sciences and Engineering Young Science Ambassador Award
- 2003 British Chevening Scholarship, funded nine months as a visiting researcher at Imperial College, London

LANGUAGES

English
German

TOP 10 PUBLICATIONS

[1] C. Chen, A. Ozcan, A. O. Yazaydin, and B. P. Ladewig, "Gas permeation through single-crystal ZIF-8 membranes," **J. Memb. Sci.**, vol. 575, pp. 209–216, 2019.

[2] N. Prasetya and B. P. Ladewig, "New Azo-DMOF-1 MOF as a Photoresponsive Low-Energy CO_2 Adsorbent and Its Exceptional CO_2/N_2 Separation Performance in Mixed Matrix Membranes," **ACS Appl. Mater. Interfaces**, vol. 10, no. 40, pp. 34291–34301, 2018.

[3] N. Prasetya, B. C. Donose, and B. P. Ladewig, "A new and highly robust light-responsive Azo-UiO-66 for highly selective and low energy post-combustion CO_2 capture and its application in a mixed matrix membrane for CO_2/N_2 separation," **J. Mater. Chem. A**, vol. 6, no. 34, pp. 16390–16402, 2018.

[4] N. Prasetya, A. A. Teck, and B. P. Ladewig, "Matrimid-JUC-62 and Matrimid-PCN-250 mixed matrix membranes displaying light-responsive gas separation and beneficial ageing characteristics for CO_2/N_2 separation," **Sci. Rep.**, vol. 8, no. 1, 2018.

[5] S. Jiang and B. P. Ladewig, "High Ion-Exchange Capacity Semihomogeneous Cation Exchange Membranes Prepared via a Novel Polymerization and Sulfonation Approach in Porous Polypropylene," **ACS Appl. Mater. Interfaces**, vol. 9, no. 44, 2017.

[6] B. Slater, Z. Wang, S. Jiang, M. R. Hill, and B. P. Ladewig, "Missing Linker Defects in a Homochiral Metal-Organic Framework: Tuning the Chiral Separation Capacity," **J. Am. Chem. Soc.**, vol. 139, no. 50, pp. 18322–18327, 2017.

[7] N. Prasetya and B. P. Ladewig, "Dynamic photo-switching in light-responsive JUC-62 for CO_2 capture," **Sci. Rep.**, vol. 7, no. 1, 2017.

[8] R. Lyndon, K. Konstas, B. P. Ladewig, P. D. Southon, P. C. J. Kepert, and M. R. Hill, "Dynamic photo-switching in metal-organic frameworks as a route to low-energy carbon dioxide capture and release," **Angew. Chemie - Int. Ed.**, vol. 52, no. 13, pp. 3695–3698, 2013.

[9] R. Lyndon, K. Konstas, R. A. Evans, D. J. Keddie, M. R. Hill, and B. P. Ladewig, "Tunable Photodynamic Switching of DArE@PAF-1 for Carbon Capture," **Adv. Funct. Mater.**, vol. 25, no. 28, 2015.

[10] R. Lyndon, K. Konstas, A. W. Thornton, A. J. Seeber, B. P. Ladewig, and M. R. Hill, "Visible Light-Triggered Capture and Release of CO_2 from Stable Metal Organic Frameworks," **Chem. Mater.**, vol. 27, no. 23, 2015.

DOCTORAL SUPERVISION

PhD Students
15 PhD students supervised to completion, graduates now working in industry, academia, consulting and entrepreneurs

CITATION DETAILS

Citations
79 publications, 2,732 citations, *h*-index=31

EDITORSHIP

Subject Editor (Separations)
Chemical Engineering Research & Design, Elsevier