

Education

2016 – Present Massachusetts Institute of Technology, USA
Dreyfus Postdoctoral Fellow
Advisor: Yogesh Surendranath

2015 – 2016 University of Nottingham, UK
Postdoctoral Fellow
Advisors: Chris Moody and Robert Stockman

2011 – 2015 University of Bath, UK
PhD
Advisor: Dave Carbery

2007 – 2011 University of Sheffield, UK
Undergraduate and Masters
Advisor: Iain Coldham

2009 – 2010 Monash University, Australia
Undergraduate Exchange
Advisors: Phil Andrews and David Lupton

Invited Lectures

2017 University of Bath (Bath, UK)
2016 Innovative Medicines Institute Symposium
(Barcelona, Spain)
2014 Syngenta Scholarship Lecture (Syngenta, UK)

Awards

2014 Syngenta Scholarship
2010 Monash University Science Achievement Award
2008 Wharton Prize

Employment

2014 GlaxoSmithKline Medicines Research, UK
CASE PhD Student Internship
Advisor: Matthew John

Five Representative Publications

Reversing the Native Aerobic Oxidation Reactivity of Graphitic Carbon: Heterogeneous Metal-Free Aerobic Oxidation
Murray, A. T., Surendranath, Y. *ACS Catal.* **2017**, *7*, 3307

Synthesis of Epibatidine Analogues by Pyrrole Diels-Alder Reactions: Rapid Access to Azabicyclo [2.2.1] heptane and 3,8-Diazabicyclo [3.2.1] octane Scaffolds for Library Synthesis

Murray, A. T., Packard, E., Nortcliffe, A., Lewis, W., Hamza, D., Jones, G., Moody, C. J. *Eur. J. Org. Chem.* **2017**, *2017*, 138.

Catalytic Amine Oxidation under Ambient Aerobic Conditions: Mimicry of Monoamine Oxidase B

Murray, A. T., Dowley, M. J. H., Pradaux-Caggiano, F., Baldansuren, A., Fielding, A. J., Tuna, F., Hendon, C. H., Walsh, A., Lloyd-Jones, G. C., John, M. P., Carbery, D. R. *Angew. Chem. Int. Ed.* **2015**, *54*, 8997.

Modular Design of SPIRO-OMeTAD analogues as hole transport materials in solar cells

Murray, A. T., Frost, J. M., Hendon, C. H., Molloy, C. D., Carbery, D. R., Walsh, A. *Chem. Commun.*, **2015**, *51*, 8935.

Biomimetic Flavin-Catalyzed Aldehyde Oxidation

Murray, A. T., Matton, P., Fairhurst, N. W. G., John, M. P., Carbery, D. R. *Org. Lett.*, **2012**, *14*, 3656.

Metrics

Google Scholar: <https://scholar.google.com/citations?user=nNOctCIAAAAJ&hl=en>

Citations: 93

h-index: 4

Complete Publication List

10. *Revisiting the incorporation of Ti(IV) in UiO-type metal-organic frameworks: metal exchange versus grafting and their implications for photocatalysis*

Santaclara, J. G., Olivos-Suarez, A. I., Gonzalez-Nelson, A., Osadichii, D., Nasalevich, M. A., van der Veen, M. A., Kapteijn, F., Sheveleva, A. M., Veber, S. L., Fedin, M. V., **Murray, A. T.***, Hendon, C. H., Walsh, A., Gascon, J., *Under Consideration.*, **2017**,

9. *Molecular-Level Insights into Oxygen Reduction Catalysis by Graphite-Conjugated Active Sites*

Ricke, N. D., **Murray, A. T.**, Shepherd, J. J., Welborn, M. G., Fukushima, T., Van Voorhis, T., Surendranath, Y. *Under Consideration.*, **2017**

8. *Reversing the Native Aerobic Oxidation Reactivity of Graphitic Carbon: Heterogeneous Metal-Free Aerobic Oxidation*

Murray, A. T., Surendranath, Y. *ACS Catal.* **2017**, *7*, 3307

7. *Synthesis of Epibatidine Analogues by Pyrrole Diels-Alder Reactions: Rapid Access to Azabicyclo [2.2.1] heptane and 3,8-Diazabicyclo [3.2.1] octane Scaffolds for Library Synthesis*

Murray, A. T., Packard, E., Nortcliffe, A., Lewis, W., Hamza, D., Jones, G., Moody, C. J. *Eur. J. Org. Chem.* **2017**, *2017*, 138.

6. *Modelling flavoenzymatic charge transfer events: development of catalytic indole deuteration strategies*

Murray, A. T., Challinor, J. D., Gulácsy, C. E., Lujan, C., Hatcher, L. E., Pudney, C. R., Raithby, P. L., John, M. P., Carbery, D. R. *Org. Biomol. Chem.*, **2016**, *14*, 3787.

5. *Symbiotic Transition Metal and Organocatalysis for Catalytic Ambient Amine Oxidation and Alkene Reduction Reactions*

Murray, A. T., King, R., Donnelly, J. V. G., Dowley, M. J. H., Tuna, F., Sells, D., John, M. P., Carbery, D. R. *ChemCatChem*, **2016**, *8*, 510.

4. *Catalytic Amine Oxidation under Ambient Aerobic Conditions: Mimicry of Monoamine Oxidase B*

Murray, A. T., Dowley, M. J. H., Pradaux-Caggiano, F., Baldansuren, A., Fielding, A. J., Tuna, F., Hendon, C. H., Walsh, A., Lloyd-Jones, G. C., John, M. P., Carbery, D. R. *Angew. Chem. Int. Ed.* **2015**, *54*, 8997.

3. *Modular Design of SPIRO-OMeTAD analogues as hole transport materials in solar cells*

Murray, A. T., Frost, J. M., Hendon, C. H., Molloy, C. D., Carbery, D. R., Walsh, A. *Chem. Commun.*, **2015**, *51*, 8935.

2. *Helical Frontier Orbitals of Conjugated Linear Molecules*

Hendon, C. H., Tiana, D. R. **Murray, A. T.**, Carbery, D. R., Walsh, A. *Chem. Sci* **2013**, *4*, 4278.

1. *Biomimetic Flavin-Catalyzed Aldehyde Oxidation*

Murray, A. T., Matton, P., Fairhurst, N. W. G., John, M. P., Carbery, D. R. *Org. Lett.*, **2012**, *14*, 3656.

Patents

Molecularly tunable heterogeneous catalysts by edge functionalization of graphitic carbons

Surendranath, Y., Fukushima, T., O'Reilly, M. E., Oh, S., **Murray, A. T.**, Kaminsky, C. J., Chu, S. B., Jackson, M. N., PCT Int. Appl. (2017) WO 2017031050 A1 20170216.

Teaching Experience

University of Nottingham Tutor 2015 -2016

During my time as a Postdoctoral Researcher in Nottingham I was additionally responsible for small group tutorial teaching in organic chemistry, which involved going through organic chemistry reactivity and mechanistic problems with first year undergraduates

University of Bath Teaching Associate 2012- 2015

Throughout my PhD I was a laboratory demonstrator and laboratory class marker for second year undergraduate organic chemistry classes.