

DR EMILIE RINGE

Professor of Natural and Synthetic Nanomaterials

Department of Materials Science and Metallurgy, Department of Earth Sciences, University of Cambridge, UK

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EDUCATION

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| Ph.D. | Northwestern University, Evanston, IL, USA Chemistry & Materials Science Research advisors: Profs. Richard P. Van Duyne and Laurence D. Marks Thesis Title: <i>Building the Nanoplasmonics Toolbox through Shape Modelling and Single Particle Optical Studies</i> | 2012 |
| Certificate | Northwestern University, Evanston, IL, USA Kellogg Certificate in Management for Scientists and Engineers | 2011 |
| B.A. / M.S. | Northwestern University, Evanston, IL, USA Inorganic Chemistry (transfer from McGill), Summa Cum Laude Research advisor: Prof. James A. Ibers Thesis Title: <i>Structure Determination and Characterization of UCuOP, UCu_{0.6}Sb₂ and UFeSe₃, Three Uranium Compounds Containing a First Row Transition Metal</i> | 2008 |
| | McGill University, Montreal, Qc, Canada Two out of three years towards Bachelor of Science in Chemistry | 2006 |

RESEARCH

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| Professor of Synthetic and Natural Nanomaterials , Department of Materials Science and Metallurgy (MSM), Department of Earth Sciences (ES), University of Cambridge, UK | 2022- |
| Assistant Professor in Multi-Scale, Multi-Dimensional Imaging of Natural and Synthetic Materials , MSM & ES, University of Cambridge, UK | 2018- |
| Adjunct Assistant Professor , Department of Chemistry, Laval University, Qc Canada | 2020- |
| Adjunct Assistant Professor , Department of Chemistry, Rice University, USA | 2018- |
| Assistant Professor , Department of Materials Science and NanoEngineering (MSNE), Department of Chemistry, Applied Physics Program, Rice University, USA | 2014-2018 |
| Research Fellow , MSM & Trinity Hall, University of Cambridge, UK | 2012-2013 |
| Graduate Student , Northwestern University, Evanston, IL, USA | 2008-2012 |
| Visiting Researcher , University of Melbourne, Melbourne, VIC, Australia (3 months) | 2011 |
| Undergraduate Researcher , Northwestern University, Evanston, IL, USA | 2006-2008 |
| Intern Pharmaceutical Formulation Researcher , Full time, Merck, Kirkland, Qc, Canada | 2005-2006 |

FELLOWSHIPS AND SCHOLARSHIPS

| | |
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| Gott Junior Research Fellowship , Trinity Hall, University of Cambridge | 2012 |
| Newton International Research Fellowship , Royal Society | 2012 |
| Presidential Fellowship , Northwestern University | 2011 |
| International Research Fellowship , University of Melbourne | 2011 |
| MRSEC Special Merit Fellowship , Northwestern University | 2010 |
| Lewis H. Sarrett Scholarship , Northwestern University | 2007 |
| Undergraduate Research Grant , Northwestern University | 2007 |
| Herbert Brennen Scholarship , McGill University | 2005 |

DISTINCTIONS AND AWARDS

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| RMS Award for Innovation in Applied Microscopy for Engineering, Physical and Material Sciences | 2024 |
| Chemical & Engineering News Talented 12 | 2021 |
| The Journal of Physical Chemistry C and ACS PHYS Lectureship Award | 2021 |
| Favourite Professor Award , Scholar-Athlete Banquet (selected by Matthew Calem) | 2017 |
| Award for Excellence in Graduate Research , Northwestern University | 2012 |

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| Anna Louise Hoffman Excellence Award , Iota Sigma Pi Society for Women in Chemistry | 2012 |
| Featured in the Office for Research Excellence in Research Report , Northwestern University | 2012 |
| Best Poster Award , 5 th International Conference on Surface Plasmon Photonics | 2011 |
| Best Poster Award , Noble Metal Particles Gordon Research Conference | 2010 |
| Phi Beta Kappa , Northwestern University | 2008 |
| B. A. Summa Cum Laude, with Departmental Honors , Northwestern University | 2008 |
| Dean's Honor List , Northwestern University | 2008 |
| Marple-Schweitzer Memorial Award , Northwestern University | 2008 |
| Award for Outstanding Suggestion on Procedure Improvement , Merck Frosst | 2005 |

RESEARCH AND TEACHING GRANTS

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| Engineering and Physical Sciences Research Council Impact Accelerator , 3 months, 2025, £25,000 |
| European Research Council Proof of Concept Grant , 1 year, 2025-2026, €150,000 |
| Engineering and Physical Sciences Research Council , Magnesium Nanoparticles: Earth-Abundant and Biocompatible Thermoplasmonics (MagNanoThermo), 2 years, 2022-2024, £553,895 |
| Royal Society International Exchange Grant (Host) , Plasmonic Nanosensor for Detecting and Curing Disease with SERS Optophysiology, 2 years, 2021-2023, £12,000 |
| Royal Society of Chemistry , Shape and Twinning in Body-Centered Tetragonal Nanoparticles, 3 months, 2021, £2,790 |
| Fonds de recherche du Québec - Nature et technologies (FRQNT) , Shedding Light on Lyme Disease, one Diagnostic at a Time, 3 years, 2021-2024, (Co-I) CA\$150,000 |
| Institute of Physics Public Engagement Grant , 1 year, 2019-2020, £1,500 |
| Royal Society of Chemistry Outreach Fund Small Grant , 1 year, 2019-2020, £1,500 |
| European Research Council Starting Grant , 5 years, 2019-2024, £1,412,815 |
| Engineering and Physical Sciences Research Council Strategic Instrument Grant , Time-resolved cathodoluminescence scanning electron microscope, 3 years, 2018-2021, (Co-I) £2,808,154 |
| Binational Science Foundation Start-up Grant , 2 years, 2017-2019, \$75,000 |
| Trinity College Dublin Visiting Professor Fund , 2018, €750 |
| 3M Non-Tenured Faculty Award , 3 years, 2017-2020, \$45,000 |
| Air Force Office of Scientific Research Young Investigator Award , 3 years, 2017-2020, \$360,000 |
| Rice University Creative Venture Fund , 1 year, 2017-2018, (Co-I) \$75,000 |
| American Chemical Society Petroleum Research Fund, Doctoral New Investigator Grant , 2 years, 2016-2018, \$110,000 |
| National Science Foundation (NSF) Industry/University Collaborative Research Centre , 2 years, 2016-2018, \$60,000 |
| Materials Research Society Outreach Grant , 1 year 2015-2016, \$6,700 |
| Rice CERCL Course Development Grant , 6 months, 2014, \$2,000 |

SCIENTIFIC AND PUBLIC SERVICE & OUTREACH (KEY EFFORTS BOLDED)

| | |
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| SuperSTEM Advisory Board | 2024- |
| Associate Editor, APL Materials (AIP Publishing) | 2023- |
| Proposal Reviewer, Newton International Research Fellowships, The Royal Society | 2021 |
| Editorial Advisory Board, The Journal of Physical Chemistry C | 2021-2023 |
| Section Chair of Plasmonics, SciX | 2021-2024 |
| Mineral Physics Group Committee Member, Mineralogy Society of Great Britain | 2019-2014 |
| Proposal Reviewer, US Army Research Lab Distinguished Postdoctoral Fellowship Program | 2019-2022 |
| Editorial Board Member, Materials Chemistry Frontiers (RSC) | 2019-2023 |
| Expert Evaluator, Marie Skłodowska-Curie Individual Fellowships (MSCA-IF) | 2019, 2022 |
| Symposium Organizer, American Chemical Society Fall Meeting (PHYS) | 2019 |
| Symposium Organizer, SciX | 2017, 2020 |
| Symposium Organizer, PittCon | 2017 |
| Director, "The Materials Touch" outreach program | 2016- |
| Conference Host, Texas Society for Microscopy, Rice University | 2016 |

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| FEI symposium technical committee, Imaging at core to pore scales, Houston | 2015 |
| Proposal Review Board Member, Research Associateship Program, National Academies | 2015-2022 |
| Proposal Review Board Chair, National Centre for Electron Microscopy, Lawrence Berkeley National Laboratory (LBNL) | 2016-2018 |
| Proposal Review Board Member, National Centre for Electron Microscopy, LBNL | 2014-2016 |
| Symposium Chair, International Union of Crystallography Meeting | 2014 |
| Reviewer for ACS Publications (103 total reviews), RSC, Nature Communications | 2012- |
| Seminar Chair, Gordon Research Seminar on Noble Metal Particles Conference | 2012 |
| Student Leader, Materials Research Centre, Northwestern University | 2011-2012 |
| Volunteer Speaker, Science Speaker Corps, Northwestern University | 2009-2012 |
| Assistant and Props Master, ETOPiA, science-themed plays, Northwestern University | 2009-2011 |
| Outreach Leader, Chute Middle School | 2009 |
| Tour Guide, High School and College visits, Merck Frosst | 2005-2006 |

SELECTED SERVICE & OUTREACH AT CAMBRIDGE & RICE

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| Deputy Head of Department for Cooperation, MSM | 2025- |
| College Council Member, Caius | 2020-2022 |
| PIA Examiner, MSM | 2020 |
| Gates Trust Application Reviewer, MSM | 2019-2023 |
| Seminar Series Organizer, MSM | 2019- |
| Wine Committee Member, Caius | 2019- |
| PIII examiner, ES | 2019 |
| Laser Safety Officer, ES | 2018- |
| PIII Examiner, MSM | 2018 |
| Faculty search committee, CHEM | 2016 |
| Director of the Electron Microscopy Centre | 2015-2018 |
| Curriculum Committee & Chair of Undergraduate Studies, MSNE | 2015-2017 |
| Keynote speaker for the Smalley-Curl Institute spring graduate student symposium, Rice | 2015 |
| Shared Equipment Authority Board Member | 2014-2018 |
| Wiess College Resident Associate | 2014-2017 |
| Gulf Coast Undergraduate Research Symposium: Attendee and judge (2014), MSNE Organizer and Keynote speaker (2015) | 2014-2015 |

SELECTED PRESS AND MEDIA COVERAGE

Bringing Chemistry to Life Podcast, “Fuel the world with light – the wonders of nano-magnesium” (2022)
MRS Bulletin, “Magnesium serves as a cost-effective, stable alternative for nanoparticle plasmonics” (2018)
MRS Bulletin, “Flexible synthesis method achieves plasmon-enhanced catalysis” (2018)
Wall Street Journal, “Tiny portraits of the natural world” (2016)
Houston Chronicle, “With \$10 million in her pocket, Rice scientist buys microscope” (2015)
Rice Magazine, “Rice University boots up powerful microscopes” (2015)
Northwestern Excellence in Research Report, “Nanoparticle shape effects and modelling” (2012)
Science Editor’s Choice, “The shape of things to come” (2011)

PROFESSIONAL ASSOCIATIONS AND MEMBERSHIPS

Royal Society of Chemistry, Member, UK
Institute of Physics, UK
American Chemical Society, USA
Materials Research Society, USA
Iota Sigma Pi, USA

PUBLICATIONS

118 published scientific articles, full list at <https://www.on.msm.cam.ac.uk/publications.html>
13,902 citations as of 4th February 2025, h-index 39