

# Rethinking Polymer Biographies

**Professor Libby Gibson**, Newcastle University and CircularChem

Libby is a Professor of Energy Materials at Newcastle University. Research in her group focuses on developing materials and devices for sustainable power, fuel and feedstocks. This involves materials development, device assembly and characterization of the underpinning photophysics and electrochemistry. Her current roles include being the academic lead for the Northern Net Zero Accelerator PB-IAA, the EPSRC Northeast Transient Absorption Spectroscopy & Microscopy Facility, Institution Director of the EPSRC CDT Renewable Energy at Northeast Universities (ReNU and ReNU<sup>+</sup>), and she is the engagement lead for the UKRI Interdisciplinary Centre for Circular Chemical Economy. Libby is the Co-Director of Post-graduate Research in the School of Natural and Environmental Science at Newcastle University.

**Duncan Lugton**, Institution of Chemical Engineers

Duncan Lugton is Head of Policy and Impact at the Institution of Chemical Engineers (IChemE). IChemE is the UK based and internationally recognised qualifying body and learned society for chemical, biochemical and process engineers, representing over 30,000 members worldwide. Duncan has worked in a range of policy areas including justice reform and health. He has a BA in Philosophy, Politics and Economics from the University of Oxford and an MA in Philosophy from Brandeis University.

**Professor Anju Massey-Brooker**, Programme Lead, Sustainable Polymers in Liquid Formulations Programme

Professor Anju Massey-Brooker is the programme lead for the RSC's Sustainable Polymers in Liquid Formulations (PLFs) programme. In this role Anju acted as the secretariat for the RSC's Sustainable PLFs cross-sectoral Industry Task Force, which led to the creation and publication of the Sustainable PLFs roadmap. Currently, Anju holds several honorary positions, including professor in practice at Durham University, senior research fellow at the University of Birmingham and Fellow of the Royal Society of Chemistry. She was also a former member of the EPSRC strategic advisory team for physical sciences and circular economy.

Anju has successfully led bids to win several multi-million euro/pound European Commission and UKRI funded high impact private-public sector collaborative programmes and acts as the project coordinator for these programmes. Before joining the RSC, Anju held the position of R&D director-principal scientist at Procter & Gamble and has 28 years' experience in leading product and technology innovation programmes, working on some of

their best-known brands that resulted in several billion dollars of sales globally and enabled their expansion into new markets.

During her career, Anju has won multiple innovation awards and is an inventor on over 50 patents. Anju holds a PhD in organometallic chemistry from the University of Cambridge.

**Dr Kate Carlisle, Programme Manager, Sustainable Polymers**

Kate is our programme manager for sustainable polymers, coordinating and connecting the different strands of the Sustainable PLFs 2040 initiative.

Kate has a life sciences background and over 15 years' experience in market research. She joined the RSC in 2010 as the business intelligence manager and then as customer experience manager.

Prior to this, Kate spent six years working in the medical technology consulting sector as a senior analyst at Cambridge Consultants Ltd and in the healthcare sector with Medipex Ltd, NHS Innovation hub, helping assess and commercialise novel healthcare interventions to deliver patient benefit.

Kate holds a PhD in molecular immunology from the University of East Anglia.

**Dr Peter Clark, Innovate UK Business Connect**

Peter is Head of Chemistry & Industrial Biotechnology at Innovate UK Business Connect where one of his key roles is to identify, develop and deliver innovation programmes & activities where chemistry and industrial biotechnology can play a key enabling role to accelerate innovation for the benefit of UK plc.

Peter has a detailed understanding of the innovation ecosystem, as well as a powerful network of connections. He has a detailed understanding of key challenges and opportunities for innovators in chemistry & industrial biotechnology and works closely with Innovate UK, and other stakeholders from Government and the private sector, to develop new programmes & initiatives that will help the UK to prosper from Net Zero.

Peter holds a PhD in Chemistry from the Clean Technology Group at University of Nottingham. Prior to joining Innovate UK Business Connect in 2015, Peter spent more than eight years in Australia gaining a broad range of experience by working across research & innovation, industry consulting and advocacy, and managing sustainability programmes for the chemicals sector.

**Professor Sally Beken, Innovate UK Business Connect**

Sally Beken is an innovation expert supporting the polymer community for over 20 years. She previously worked in the medical industry developing polymer medical devices with new formulations to reduce impact on the ozone layer. Having spent many years working with polymer experts she has an extensive personal network to draw upon from both the academic and business communities to facilitate the changes we need in the sustainability of polymeric materials and innovation for future polymer products. Her Ph.D. was in the modification and depolymerisation of polymer compounds, and she has an honorary role as Professor at Brunel University. Her current role at Innovate UK Business Connect includes strategic interventions to support and shape projects involving multiple stakeholders from the polymer supply chain from SMEs and academics to major retailers. She was deeply involved in the set-up of the £60m IUK Smart Sustainable Plastics Packaging challenge and has supported multiple polymer innovators during the challenge delivery phase. She founded and runs the UK Circular Plastics Network a community working to ensure that less plastics waste enters the environment or is sent to landfill.

**Dr Dan Korbel, Royal Society of Chemistry**

Dr Daniel Korbel leads the Royal Society of Chemistry's Science Policy Unit which brings together chemistry evidence on health and sustainability themes (including the circular economy, and plastics and polymers), making it accessible to decision makers to highlight the key challenges and potential solutions. Dan's team draws on the insights of a community of over 50,000 RSC members working in the chemical sciences in the UK and internationally. Dan has a background in the life sciences. Following his postdoctoral research, Dan worked in advisory and leadership roles for a range of organisations in the charity and public sectors, including the Wellcome Trust, the UK Research Councils and the British Council where he was Global Head of Science.

**Dr Feja Lesniewska, University of Surrey**

Dr Feja Lesniewska is a Senior Lecturer in Sustainable Transitions and Environmental Law at the Surrey Law School, University of Surrey. Her research focuses on law, regulation and standards role in enabling a transition to a sustainable circular economy within planetary ecosystems. In her research Feja also focuses on the growing opportunities from digital technologies, including AI, to transition to a circular economy. Feja has undertaken field work research in Central and West Africa, China, Europe, Russia and the UK.

**Dr Thomas Baker, WRAP**

Thomas is a Specialist in Plastics at WRAP with a background and PhD in Materials Engineering on compostable plastics blends. At WRAP, his core work relates to plastics, waste, and circularity. He has worked on developing the Plastics Waste Hierarchy and

undertook a critical review of Life Cycle Assessments to review and update the UK Government's Waste Hierarchy for England; worked closely with government to perform a Review of Plastics in Agriculture; and created Guidance for Bioplastics for the Welsh government. He has also supported the CircularChem develop their policy white paper and lead on elements of the UK Plastics Pact under WRAP.

**Dr Freya Burton**, LanzaTech

Freya has served as Chief Sustainability Officer of LanzaTech since 2016. She has served in various other roles at LanzaTech from 2007 through 2016, including roles in communications, government relations, human resources and research and development. Freya holds an M.A. from Corpus Christi College at the University of Cambridge.

**Dr Nima Roohpour**, Reckitt

Nima Roohpour is the Head of the Polymer and Formulation Science Platform at Reckitt, he is responsible for the finding and evaluation of inventions and new technologies/products and identifying innovation partners for Reckitt health and nutrition businesses. Passionate about scientific breakthroughs, Nima has worked with many health-tech start-ups negotiating partnerships and commercialisation, he is continually looking for the next big ideas, identifying cross-category platforms that can bring significant growth for Reckitt.

During his career Nima developed expertise in product research and development through developing new technologies, evaluating external opportunities, innovating and supporting new product claims together with managing R&D teams and projects including all stages of the product lifecycle from exploration to launch.

Nima joined Reckitt in 2019 from GSK consumer healthcare where he was a Principal Scientist in consumer health R&D with more than 12 years of experience in innovation and new product development. Nima is a Fellow of the Royal Society of Chemistry with Ph.D. in Biomaterials from the Queen Mary University of London.

**Dr Anna Zhenova**, Green Rose Chemistry

Anna Zhenova is the CEO of Green Rose Chemistry, a mission-driven consultancy working to accelerate the sustainable chemical transition. She started her career in the US, working in labs at MIT, Caltech, and Carnegie Mellon before applying her chemistry expertise to advance green chemistry at the GC3. After earning her Ph.D. at the University of York, she founded Green Rose Chemistry in 2019 to provide unbiased expertise to companies transitioning to sustainability. She works with clients in industries ranging from fragrances to construction manufacturing, bringing green chemistry out of the lab and into practical use.

**Dr Lorraine Ferris**, Henry Royce Institute

Lorraine Ferris is a Transforming Foundation Industries Fellow of the Henry Royce Institute, University of Manchester.

Lorraine commenced her career in the Chemicals sector in ICI over 30 years ago, based at Wilton site with secondments to Belgium and USA. Subsequently, she has worked in consultancy and interim management roles, as Managing Director of an environmental company and as a Chemicals Sector Advisor at the Department of International Trade.

**Professor Andrew Dove**, University of Birmingham

Andrew graduated from the University of York with an MChem degree in 1999. His subsequent Ph.D. studies were conducted under the supervision of Prof. Vernon C. Gibson FRS at Imperial College, London, focused on metal catalysed co-ordination insertion polymerisation. Andrew undertook post-doctoral research first under the guidance of Prof. Robert M. Waymouth at Stanford University, California and then as a CIPMA post-doctoral fellow at IBM, San Jose, California under the supervision of Dr James L. Hedrick and Prof. Robert M. Waymouth. Andrew returned to the UK to take up a RCUK Fellowship in Nanotechnology in September 2005 before being appointed as an Assistant Professor in September 2006 and subsequently as an Associate Professor in September 2009 before being appointed as a Full Professor in June 2014. In January 2018, Andrew joined the School of Chemistry at the University of Birmingham as Professor of Sustainable Polymer Chemistry. His research is centred around understanding and controlling degradation in polymers and plastics, with interests ranging from sustainable sourcing and manufacture, environmental degradability and plastic recycling. Andrew is the co-lead of the Birmingham Plastics Network, which is an interdisciplinary network of over 60 researchers at the University of Birmingham, that aims to engage with the plastics waste problem comprehensively, utilising a whole-systems approach and enabling widespread impact which considers economic, environmental, social and ecological impacts.

**Dr Harry Barraza**, National Measurement Laboratory at LGC

Dr Harry Barraza is a Relationship Development Director at the National Measurement Laboratory at LGC.

- PhD Chemical Engineering and Materials Science (Nanofilms), University of Oklahoma; PG Intellectual Property Law, Bournemouth University
- Open Innovation Lead (Unilever R&D, UK), Head of Open Innovation (Arla Foods, Denmark), Relationship Development Director (LGC, UK). In the past 5 years I have been building strategic partnerships for LGC across UK with a focus on metrology research and applications across health, food and sustainability. More details in my LinkedIn page: <https://www.linkedin.com/in/harry-j-barraza-0016601/>

- Trivia: Fair-weather cyclist, mostly on coastal roads around the UK.

### **Professor Jin Xuan, University of Surrey**

Professor Jin Xuan is the PI and director of the UKRI Interdisciplinary Centre for Circular Chemical Economy.

Professor Xuan joined the University of Surrey as the Associate Dean of Research and Innovation for the Faculty of Engineering and Physical Sciences in September 2022. He holds a Chair in Sustainable Processes and a prestigious EPSRC Open Fellowship at the School of Chemistry and Chemical Engineering. In 2024, Professor Xuan was welcomed as a Turing Fellow at The Alan Turing Institute as part of a cohort to tackle societal challenges. Before moving to Surrey, he was the Head of the Department of Chemical Engineering at Loughborough University.

Professor Xuan is the recipient of the Philip Leverhulme Prize of Engineering in 2022 for his pioneering research on Energy and AI, and the Beilby Medal and Prize, jointly from the Society of Chemical Industry (SCI), the Royal Society of Chemistry (RSC), and the Institute of Materials, Minerals and Mining (IOM3) in 2020 for his work that 'has exceptional practical significance in chemical engineering, applied materials science, energy efficiency or a related field'.

Professor Xuan's current research is focusing on the digital transformation of complex chemical and processes via integrated online/operando characterisation, advanced modelling and data-centric deep learning. The vision of Professor Xuan's group is to deliver a paradigm-shift in how future chemical processes can be designed, optimised and self-evolved throughout their entire lifecycle, enabling connected products and services, and making them highly-efficient, zero-loss systems, whilst maximising their creative value.

### **Dr Tony Heslop, BASF**

Tony studied Chemistry and Polymer Science at Loughborough University before embarking on a career in the coatings industry. After gaining lab experience in three UK based paint manufacturers, he moved into a commercial role selling pigments and additives into the coatings industry with Ciba Specialty Chemicals. During this period, he returned to university and gained an MBA. Aside from the sales role, Tony was also Global Product Manager for the Polymer Specialties product line for Ciba for two years, responsible for portfolio management, margin management, cost optimisation and targeting.

After BASF acquired Ciba, Tony transitioned to an account manager role in the BASF dispersions business, responsible for sales of products for pressure sensitive adhesives, construction, and fibre bonding into much of Northern Europe. Following a spell as UK Market Development Manager, he became Senior Sustainability Manager for BASF in UK/Ire in 2018. In April 2024, he took the role of EMEA Regional Lead Sustainability, coordinating

and prioritizing the activities of the team of country Sustainability Managers across the region.

**Dr Gary Walker, Lubrizol**

Gary is a technical fellow working within the innovation team at Lubrizol. He started his career within the pharmaceutical sector working on hit to lead drug discovery projects before joining Lubrizol in 2006. A large slice of his career was leading a team of chemists as the R&D technology manager for detergents, before formally moving into his current role in 2020 focussing on sustainable chemistries across all of Lubrizol businesses. Gary has a PhD from the university of Nottingham and is both Chartered and Fellow of the Royal Society of Chemistry.

**Marvine Besong, DeepTech Recycling**

Marvine is the Managing Director of DeepTech Recycling Ltd. He has spent almost a decade developing and commercialising technology for chemical recycling of plastic waste. Before joining DeepTech Recycling Ltd he was the Technical Director at Recycling Technologies Ltd.

**Professor Matthew Unthank, Northumbria University**

Matt Unthank is a Professor of Chemistry at Northumbria University and has background in polymer, plastics and coatings research, specifically for commercially relevant applications. He has a career spanning both industrial and academic roles across the pharmaceutical (GSK), industrial chemicals and coatings industries (AkzoNobel) in addition to more recent academic roles as a visiting academic at the University of Manchester and in his current role as Professor of Chemistry at Northumbria University. Over recent years he has worked on projects from a range of funders (EPSRC, DSTL and OfWAT) as well as numerous research projects with industrial partners such as AkzoNobel, Altana, SHD Composites, Northumbrian Water and more. He is an EPSRC Researcher in Residence Fellow, with the High Value Manufacturing Catapult (CPI and NCC) to develop sustainable high-performance polymers, a member of the EPSRC Early Career Forum (ECF) in Manufacturing Research (<https://ecfmanufacturing.com/current-members/>) and co-lead for the bulk chemical sector in the sustainability focussed £5M EPSRC-TransFire Hub involving 12 academic institutions, >100 companies and 14 non-governmental organisations (<https://transfire-hub.org/>). Further to this he is a founding member of the 'Synthesis and Polymer Innovation' centre at Northumbria (SPIN, [www.northumbria.ac.uk/spin](http://www.northumbria.ac.uk/spin)) to support polymer scale-up and commercialisation projects with industrial partners.

**Dr Pierre Martin, CPI**

Pierre obtained his PhD from Northumbria University in 2013, looking at block copolymer for fouling control with AkzoNobel. He then moved to researching new binders and curing chemistries for powder coatings at AkzoNobel for 11 years, looking at bio renewable feedstock, improved durability coatings as well as polymerisation and curing systems for lower carbon footprint before joining CPI as Principal Scientist on Sustainable Materials.

**Professor Rachael Rothman, University of Sheffield**

Rachael is Professor of Sustainable Chemical Engineering, Director of the South Yorkshire Sustainability Centre, Co-Director of the Grantham Centre for Sustainable Futures, Co-Director of the UK Hub for Research Challenges in Hydrogen and Alternative Liquid Fuels, Lead of the Life Cycle Assessment Regulatory Science and Innovation Network and Academic Lead for Sustainability at the University of Sheffield.

Rachael is a thought leader in sustainability, regularly engaging with policy makers, the media and the public. Her research expertise lies in development and analysis of sustainable processes and systems. She has a background in large scale hydrogen production and carbon dioxide utilisation and has more recently worked on the sustainability of Foundation Industry processes, plastics and packaging. Rachael leads projects that take an interdisciplinary, whole systems approach to developing routes to net zero and zero waste, combining insights from engineering, psychology, linguistics, sociology and the physical and biological sciences.