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Hub Year 1: Key Metrics





Co-investigators



6 SCHEMA events across the UK



£0.5m funding leveraged in year 1



Launched 5 social media platforms





Academics engaged directly with 3 government departments



£75m funding applications with **SCHEMA support in** year 1







Monthly PDRA-led Early Career Researcher Forums



Growing Network of >40 affiliate researchers



6 UK Higher Education Institution partners



>30 Strategic Partners across sectors and supply chains

Foreword

SCHEMA has had a good first year working on establishing our community and partnerships. Our early successes reflect the strength of our team and the urgency of our mission. Over the first year, we have recruited a talented network of early career scientists and engineers, and hired key Hub staff including our Operations and EDI Manager Dr Steph Montanaro, Industry and Partnerships Manager Dr Gregory Sulley, and Communications Manager Dr Charl Linde. We have also started 15 Discovery Research Projects across our six university partners.

I am particularly proud of the interdisciplinary and cross-sector collaboration that is already shaping SCHEMA's work. The success of joint events, such as with the EPSRC-Unilever Cleaner Future Prosperity partnership, has highlighted the power of collaboration across UKRI investments and maximising our impact. We will continue to build these connections to foster innovation.

As we look forward, our ambition grows. Our 2025 conference in Oxford, 2026 conference in Cambridge, and a joint symposium with the AIChemy Hub in London, will continue to deepen national collaboration. We will announce our first Early-Stage Commercialisation Projects in 2026 and welcome many more affiliated researchers to our expanding network.

Thank you to all who have contributed to SCHEMA's vision so far. We look forward to working together to tackle sustainability challenges across chemistry and polymer material science.

e william

Prof Charlotte Williams SCHEMA Director

About SCHEMA

Hub Management



Prof Charlotte Williams SCHEMA Director



Prof Matthew Davidson SCHEMA Co-Director & Sustainability Assessments Lead



Prof Kylie Vincent EDI Lead



Prof Matthew Rosseinsky Renewable Chemicals & Power Lead



Prof Laura Torrente-Murciano Process Chemistry & Engineering Lead



Prof Antoine Buchard Digital & Information Technologies Lead



Prof Clive Siviour Polymers, Materials & Application Development Lead



Dr Greg Sulley Industry & Partnerships Manager



Dr Steph Montanaro Hub Operations & EDI Manager



Dr Charl Linde Communications Manager

About SCHEMA

Vision and Mission

The Sustainable Chemicals and Materials Manufacturing Hub (SCHEMA) is a multi-partner, multi-disciplinary research programme uniting leading researchers across the UK with commercial, civic, and technology translation partners. Our shared goal: to transform the design, manufacture, and end-of-life of chemicals and materials, creating a more sustainable and resilient manufacturing future.

SCHEMA's vision is to develop the new science and engineering that enables the manufacture of sustainable chemicals and materials — using raw materials from waste, air, and water, and powered by renewable electricity. This work supports UK supply chain resilience and fosters deeper connections across manufacturing sectors, from chemicals to polymers.

By exploiting synergies between diverse industry users, SCHEMA empowers high-growth downstream businesses in transport, energy generation/storage, construction, electronics, and fast-moving consumer goods to reach net-zero emissions. We seek to achieve our vision by addressing a set of grand challenges.



- 1. Transform renewable resources and wastes, with renewable power, into chemicals and polymers
- 2. Develop innovative and adaptable chemical manufacturing processes
- 3. Integrate digital and information technologies throughout materials design and recycling
- 4. Design products for life-cycle sustainability

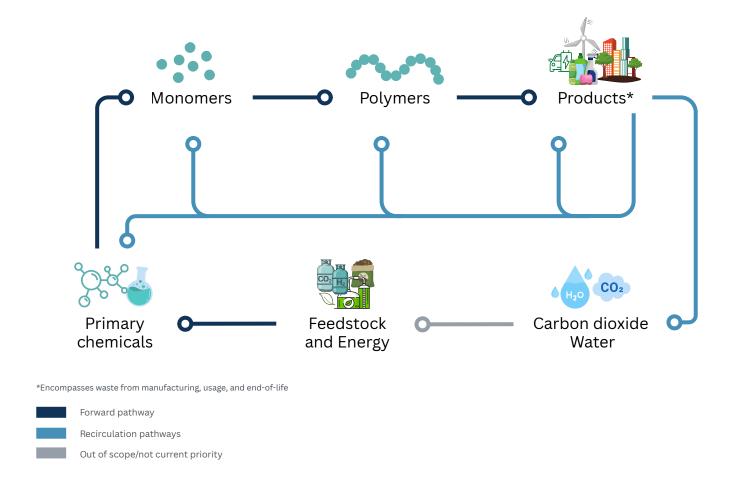
Why it matters

The manufacture of chemicals and materials is critically dependent on fossil fuels, contributes significantly to global CO_2 emissions, and generates significant quantities of persistent waste — notably plastics. SCHEMA is working to reverse this trajectory. By using CO_2 , biomass, and industrial wastes, and reimagining materials for circularity, we aim to contribute directly to the UK's net-zero transition.



Research Programmes

Hub Research Years 1-2



The scope of the first phase of the SCHEMA Hub is to develop polymer manufacturing routes that start with renewable feedstocks like biomass, CO₂, and industrial recyclate, to produce key chemical intermediates and monomers. As polymers are a key, but not only, component of the final product, we pair chemistry with material engineering and application-focused development across length scales, ensuring solutions are scalable and fit for end users in our priority sectors: electronics, construction, transport, energy generation and storage, and fast-moving consumer goods.

Circularity is central to our approach. We design recirculation pathways from the outset, giving as much attention to end-of-life as to the renewables-to-product route, by explicitly targeting recyclability and remanufacturing. Our research aims to lower energy requirements and improve process selectivity to enable efficient, high-value material recovery.

Research Programmes

Research Work Packages

The five inter-linked work packages focus on solving SCHEMA's grand challenges. To prevent information silos, research organisations, companies and individuals are members of multiple work packages. These programmes also have have academic leads charged with identifying synergies and links between research projects.

WP1 Renewables to basic chemicals and monomers

Selective and efficient methods to transform small molecules and wastes into chemicals and intermediates.

WP2 Digital and Information technologies

Open-access digital platforms, integrated with process, product, and sustainability data, to deliver efficient manufacturing.

WP3 Polymers, materials & application development

Transforming renewables into sustainable polymers and materials, embedding circularity in design and application.

WP4 Process chemistry & engineering

Developing robust and scalable future manufacturing systems for multi-phase process chemistry and engineering to maximise sustainability and resilience.

WP5 Sustainability Assessments

Assessments integrated with technical and theoretical results from across work packages.

Early-Stage Commercialisation Projects

Early-Stage Commercialisation Projects support translation of recent discoveries and outputs by accelerating manufacturing uptake. These projects must involve both academic and strategic partners. Flexible funding and project durations are tailored to each opportunity.

Discovery Research Projects

Discovery Research Projects sit both within and between WPs and focus on high-impact, innovative discoveries. Projects are delivered by postdoctoral researchers, supervised by several investigators across institutions and disciplines, and can be supported by SCHEMA strategic partners.



Research Programmes

SCHEMA Postdoctoral Research Associates

SCHEMA's first phase of Discovery Research Projects, established over 2024-25, have attracted high-calibre postdoctoral researchers in chemistry, engineering, and computation. As of August 2025, ten PDRAs have been recruited and are working on SCHEMA's grand challenges with a further four researchers appointed starting in the coming months.

Liam is based at Cardiff University and his work investigates catalysts for the hydrogenation of CO₂ to methanol; specifically methods of increasing reaction selectivity. Aniruddha is based at the University of York and is working on carbohydrate monomers and polymers for liquid formulations.

Yuan is based at the University of Bath and her research focuses on developing self-regulating flow reactors to better understand and control lactide copolymerisation processes.

Marcel is based at the University of Liverpool and his research focuses on the development of heterogeneous catalysts for the conversion of biomass-derived furfural into diols and monomers.

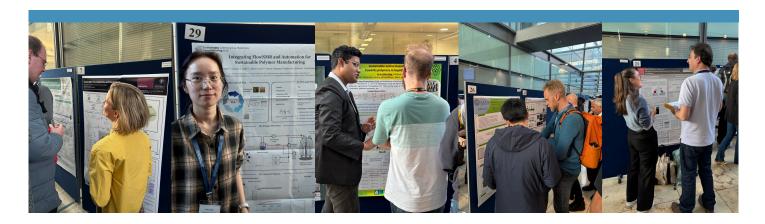
Peihao is based at the University of Oxford and his research project investigates sustainable polycarbonates for impact protective devices.



Jirui is based at the University of Cambridge and her research focuses on the development of a modular continuous flow platform for cyclic ester copolymerisation processes.

Zoe is based at the University of Bath and her research project is focused on Prospective Life Cycle Assessment (LCA) for monomers and polymers in the experimental projects.

Meet all of our researchers on our website $^{\stackrel{\circ}{\sim}}$



Case Studies





Translating discoveries to industry scale: continuous manufacturing of biodegradable microcapsules

Microcapsules, widely used in sectors such as pharmaceuticals, personal care, and agriculture, are predominantly produced from non-biodegradable, petroleum-based polymers that persist in the environment and pose risks to ecosystems and the food chain. With increasing regulatory restrictions on microplastics and a market valued at nearly USD 14 billion in 2024, manufacturers face growing pressure to find sustainable alternatives. Biodegradable, renewable, and biocompatible polysaccharide-based microcapsules present a promising solution, but current methods of production are complex and unsuitable for large-scale manufacturing.

To address this challenge, the SCHEMA Hub has launched a collaborative R&D project between the University of Bath and Naturbeads Ltd., a spin-out company founded on Bath's pioneering work in biodegradable cellulose microspheres. The project aims to develop scalable continuous manufacturing processes for carbohydrate-based microcapsules and validate their applications with the greatest potential to increase energy efficiency in their manufacturing and reduce plastic pollution. Supported by Naturbeads' industrial expertise and access to its pilot plant, the initiative seeks to accelerate the translation of lab-scale innovation into industrial practice, building on a strong partnership between academia and industry to deliver commercially viable, environmentally sustainable microcapsules.



Case Studies

TOPSOE



Valorisation of CO₂ through hydrogenation to methanol

Global methanol demand is rapidly increasing, with production expected to rise from 98 Mt/yr in 2021 to 500 Mt/yr by 2050, much of it from renewable sources such as emethanol. Produced by hydrogenating biogenic CO₂ with green hydrogen, e-methanol offers a sustainable alternative to fossil-based methanol but relies on highly efficient and selective catalysts to be commercially viable. While conventional CuO-ZnO-Al₂O₃ catalysts are well established, catalyst stability and competing side reactions limit efficiency, leaving scope for innovation in catalyst design and mechanistic understanding.

A collaborative project between Cardiff University and global catalyst manufacturer TOPSOE aims to advance this frontier by developing next-generation catalysts tailored for CO₂ hydrogenation. The research combines experimental synthesis, operando studies, and computational modelling to unravel catalyst structure-performance relationships and enhance selectivity for methanol. TOPSOE's industrial expertise, including extensive methanol plant operations and specialised e-methanol technologies, complements Cardiff's catalyst development, with knowledge exchange, benchmarking, and pilot-scale testing forming key aspects of the partnership. This collaboration aims to accelerate the translation of lab-scale innovation to industrial deployment and provide valuable training opportunities for early career scientists in sustainable catalysis.



Case Studies





Renewable Polyesters for Recyclable and Repairable Composite Resins

The composites industry, valued at USD 94 billion globally in 2022, underpins critical applications in energy generation/storage and transport sectors, but faces sustainability challenges due to the non-recyclable nature of conventional thermoset epoxy resins. These resins are difficult to repair or remanufacture, and fibre recovery is inefficient, limiting circularity in high-value sectors. To address this, a collaborative project between the University of Oxford and leading resin manufacturer Scott Bader focused on designing renewable polyesters that are recyclable, repairable, and compatible with existing composite manufacturing processes.

The project has already successfully developed polyester resin formulations, derived from commercially available renewable feedstocks, achieving viscosities suitable for industrial processing and mechanical performance comparable to conventional resins. Importantly, the materials incorporate dynamic chemistry that allows low-energy repair and recycling. Close engagement with Scott Bader is helping deliver outcomes that are industrially relevant, including through researcher secondments, technology transfer, and evaluation at their facilities. The project is also supported by additional EPSRC Impact Acceleration funding and seeks to progress toward recyclable, high-performance composites.



Building Strong Partnerships

Workshops and symposia

To continue our engagement with existing strategic partners and expand our network to new partners, we've organised four workshops and symposia. These events have facilitated open discussion of broader field challenges around focus areas for sustainable chemicals and materials manufacturing. Topics have included feedstock and resource sustainability, next generation sustainable plastics and elastics, circularity and biodegradability for polymers in formulations, and innovations in recycling of polymers and industrial wastes. These workshops have promoted cross-supply chain discussions, bringing industrial and academic researchers together to (re)define problems and identify potential opportunities for collaborative research.

Bilateral discussions

Our Industry & Partnerships manager has also worked directly with existing and new partners through bilateral discussions and site visits to strengthen the relationships between the Hub and its strategic partners. These discussions have identified specific technical opportunities where there is strong potential to leverage our expertise to develop co-created research programmes within the Hub.

Leverage and support

We have already secured over £500,000 worth of support from our strategic partners to help deliver our first set of discovery research projects. We are actively working to increase both meaningful scientific support and leverage. As a Hub, we support the wider UK academic research community through strategic support for research funding applications aligned to SCHEMA's aims. So far, we have supported fifteen applications, a third of these from early career academics.



SCHEMA Events

SCHEMA has delivered a regular programme of events. These are important in establishing the Hub as a convening space for the UK's sustainable chemicals and materials manufacturing community. These include conferences like the RSC Chemical Feedstocks for Sustainable Industry and the RSC Faraday Discussion: Polymerisation and depolymerisation chemistry.



Across the series of events, we welcomed 330 participants. The events featured lectures from 17 industry leaders and 12 early career academic researchers. These events were organised in partnership with the Royal Society of Chemistry (RSC), the Innovation Centre for Applied Sustainable Technologies (iCAST), and the Unilever Prosperity Partnership Team.

View upcoming events on our website $\overset{:}{\sim}$

Early Career Researcher Development

Early Career Researcher training and career mentoring is at the foundation of the SCHEMA Hub since progress will require both scientific breakthroughs and capable, confident leaders who can operate effectively across academia, industry, and policy. To achieve this, we have embedded training throughout the Hub's activities, integrating dedicated sessions into our Spring and Autumn Conferences to maximise engagement while keeping time demands manageable.

Developing Sustainable Leaders Programme

The Developing Sustainable Leaders Programme was created after an extensive consultation with strategic partners, academics, and the broader SCHEMA community. From this, three priority training areas emerged:

- Core leadership and professional skills
- Technical and sustainability-specific skills
- Cross-disciplinary integration

These priorities have already shaped the content of the 2025 Developing Sustainable Leaders training sessions which included intellectual property training facilitated by Oxford University Innovation (OUI), an EDI workshop encouraging reflection on equality, diversity, and inclusion in research environments, and a panel on entrepreneurship.

Mentorship

Mentorship is a key component to the Hub's approach to professional development. Our Mentorship Programme, launched in 2025, connect postdoctoral researchers with experienced mentors from either academia and industry. Over 20 mentors have already volunteered to joined the scheme. The emphasis is placed on the PDRAs to develop the connections: arranging mentoring meetings, setting agendas, and leading discussions.

Beyond this, PDRAs benefit from peer-to-peer support, guidance from Work Package Leads, and additional opportunities through the SCHEMA Affiliate Researcher Network, and collaborators from partner institutions. Together, these layers of mentorship provide both the strategic guidance and day-to-day support for career progression.



Early Career Researcher Development

Early Career Researcher Forums

To maintain connections between SCHEMA events, we have established monthly PDRA-led Early Career Researcher Forums. These one-hour online meetings, originally chaired by Hub Manager Dr Steph Montanaro, are now led by PDRAs, with researchers rotating as Chair for three-month terms. Acting Chairs set agendas, invite speakers, and guide discussions.

Each new researcher gives an introductory presentation at the meeting within their first two months, outlining their research, links to SCHEMA Work Packages, and their host lab's capabilities. Dr Ella Clark (University of Oxford) chaired meetings from June to August 2025. Forum content combines introductory talks, research updates, and informal exchanges - providing a valuable space for collaboration opportunities, shared problem-solving, and strengthening a sense of belonging across the Hub's six partner universities.



Getting the chance to interact with other researchers from different fields has been very valuable, as it has given me the opportunity to understand the context for my work.

- Marcel Hidajat, SCHEMA PDRA at Liverpool University

Communications

SCHEMA established the foundations of its long-term communications strategy in year 1, launching a website, newsletter, and multi-platform social media presence, and appointing Dr Charl Linde as Communications Manager.

Key achievements include:

- Website: schemahub.ac.uk launched as a central hub for news, events, and resources.
- Newsletter: Four editions published, with open rates rising from 13% in January to 65% in July, showing rapidly growing engagement.
- Social media: Over 1000 LinkedIn followers in under a year, alongside activity on Facebook, Instagram, Bluesky, and YouTube.
- Content: Regular news updates, event summaries, and accessible stories highlighting SCHEMA's research and partnerships.

These channels ensure SCHEMA's work is visible, accessible, and relevant to audiences spanning academia, industry, policy, and the wider public, while creating a strong foundation for future public engagement activities.



Communications

UK Networks and Advocacy

In its first year, SCHEMA has been active in both UK & international advocacy and policy engagement, contributing to the UK's sustainability agenda for chemicals and materials.

- **Circular Economy Taskforce:** Prof Williams (Hub Director) is Chemicals & Plastics Chair supporting the development of HM Government's circular economy strategy for England.
- **Royal Society Policy Fellowship:** Prof Buchard (WP2 Lead) completed a Royal Society Policy Fellowship at the Department for Business & Trade, working with the chemicals team.
- **Strategic Engagement:** SCHEMA researchers are working with experts in the Department for Energy Security & Net Zero on resource efficiency and UK chemical industry models.
- Chemicals, Waste, and Pollution Panel: Prof Davidson (Hub Co-Director, WP5 Lead) is working with the RSC on the Burlington Chemical Pollution Consensus.
- **UK-ASCM:** Profs Williams and Rosseinsky helped establish the Alliance for Sustainable Chemicals and Materials, chaired by Dr Jen Vanderhoven in monthly meetings with Dr Greg Sulley (Industry & Partnerships Manager), representing SCHEMA.

Connecting with other hubs and Supporting Future Initiatives

SCHEMA is already working with other EPSRC Hubs including: Cellular Agriculture Manufacturing, AI for Chemistry, Sustainable and Highly Selective Membranes for UK Industry, UK Catalysis Hub. We are also working with Centres for Doctoral Training including: Inorganic Materials for Advanced Manufacturing, Digital and Automated Materials Chemistry, and Sustainable Chemical Technologies.



Inclusive & Sustainable Hub

Equality, Diversity & Inclusion

Diverse teams produce better science, more robust solutions, and more resilient pathways to real-world impact. In Year 1 the Hub defined and began implementing its EDI strategy (published and approved in January 2025) which sets out our vision, scope, and practical actions to make SCHEMA a genuinely inclusive environment for all.

EDI in practice

In year one we have translated policy into practice through concrete steps that embed fairness and access into our recruitment, induction, events and researcher development activities. Specific actions include:

- **Resourcing EDI leadership:** We created a combined Hub Operations & EDI Manager role and recruited Dr Steph Montanaro in Year 1.
- Fair and inclusive recruitment: Hub managers have served on recruitment panels across partner institutions to ensure best practice carried out.
- **PDRA induction:** All new SCHEMA PDRAs receive a 1:1 induction with Hub managers, covering the Hub's vision, training, events and answering questions.
- **Mentorship and affiliation:** All SCHEMA PDRAs are offered mentors; affiliates may apply to be matched where appropriate. Affiliation is an open route for PhD students, PDRAs and early career researchers not directly funded by the Hub.
- **Accessible events:** Events rotated around the UK, free to attend and include hybrid participation where requested. Accessibility guidance is provided in advance.
- **Everyday culture and governance:** The Hub encompasses respectful discussion and broad participation
- **EDI Policy visibility:** The SCHEMA EDI policy was approved and published (dated 31 January 2025) and forms part of all Hub communications and governance.



Inclusive & Sustainable Hub

Sustainable Practices in SCHEMA

Environmental sustainability is at the heart of SCHEMA's mission, not only in our research aims but also in the way we operate as a Hub. In Year 1, we began to embed sustainable practices into our events, laboratories, and researcher development, taking the first steps toward a comprehensive sustainability strategy.

Sustainable laboratories

All SCHEMA postdoctoral researchers are introduced to the Laboratory Efficiency Assessment Framework (LEAF), and we are actively promoting best practice across partner institutions. In Year 1 we captured the baseline LEAF status of SCHEMA-affiliated labs. Results showed a diverse range of engagement, from 2 labs already holding Gold accreditation to others just beginning the application process, currently 40% of SCHEMA labs are LEAF accredited.

Beyond LEAF

SCHEMA partners and collaborators are extending sustainable practices in laboratories beyond LEAF accreditation, piloting innovative waste reduction and recycling initiatives.

- Oxford-Merck Pilot SCHEMA Oxford labs are partnering with Merck on a programme to recycle lab plastics via pyrolysis, aiming to convert waste back into usable plastics. Initial assessments show current levels at ~20 kg plastic waste (≈20 kg CO₂) per person annually, with significant potential for emissions reduction.
- York Accreditation The Green Chemistry Centre of Excellence (University of York) is on track for Green Impact accreditation in October 2025, building on years of student-led projects to advance sustainability in laboratories and across campus.
- LabCycle Partnership Founded by University of Bath alumna Helen Liang, LabCycle decontaminates and recycles common lab plastics (PP, HDPE, PS, PET), returning them into the supply chain as lab consumables and supporting a circular economy.



Inclusive & Sustainable Hub

Sustainable Practices in SCHEMA

Greener events

Half of SCHEMA's events in Year 1 were delivered in hybrid format, enabling wider participation while reducing the travel footprint of our community. In-person events prioritised central, accessible venues and low-cost accommodation options. This approach balances the importance of in-person networking with our commitment to reducing carbon emissions and maximising inclusivity.

Data Management

SCHEMA's Data Management Plan was approved on 31 January 2025. The plan sets out how research, governance, and engagement data will be managed securely, stored appropriately, and shared responsibly. While SCHEMA provides overarching guidance, day-to-day data management is the responsibility of individual PDRAs and researchers, who must follow their host institutions' policies. In this first year our focus has been on establishing procedures and raising awareness.



Appendices

SCHEMA Academics

Name	Role	Institution
Prof Charlotte Williams OBE FRS	SCHEMA Director	University of Oxford
Prof Matthew Davidson	SCHEMA Co-Director & Sustainability Assessments Lead	University of Bath
Prof Matthew Rosseinsky OBE FRS	Renewable Chemicals & Power Lead	University of Liverpool
Prof Antoine Buchard	Digital & Information Technologies Lead	University of York
Prof Clive Siviour	Polymers, Materials & Application Development Lead	University of Oxford
Prof Laura Torrente-Murciano	Process Chemistry & Engineering Lead	University of Cambridge
Prof Kylie Vincent	EDI Lead & Co-Investigator	University of Oxford
Dr Stephen Allen	Co-Investigator	University of Bath
Prof Laurence Brassart	Co-Investigator	University of Oxford
Prof Sir Richard Catlow FRS	Co-Investigator	Cardiff University
Dr Sourav Chatterjee	Co-Investigator	University of Bath
Prof David Clifton	Co-Investigator	University of Oxford
Prof Ben Davis FRS FMedSci	Co-Investigator	University of Oxford
Dr Simon Freakley	Co-Investigator	University of Bath
Dr Georgina Gregory	Co-Investigator	University of Oxford
Prof Cameron Hepburn	Co-Investigator	University of Oxford
Dr Ulrich Hintermair	Co-Investigator	University of Bath
Prof Graham Hutchings CBE FREng FRS	Co-Investigator	Cardiff University

Appendices

SCHEMA Academics contd.

Name	Role	Institution
Dr Hannah Leese	Co-Investigator	University of Bath
Dr Rick Lupton	Co-Investigator	University of Bath
Prof Davide Mattia	Co-Investigator	University of Bath
Dr Alexander O'Malley	Co-Investigator	University of Bath
Prof Catherine Redgwell	Co-Investigator	University of Oxford
Prof Matt Reed	Co-Investigator	University of Liverpool

Phase 1 Discovery Research Projects

PDRA	Title	Project lead and industry contact(s)
Liam Bailey	Valorisation of carbon dioxide through hydrogenation to methanol	Graham Hutchings Ronan Bellabarba (TOPSOE)
Peihao Song	Sustainable Materials for Impact Applications	Clive Siviour
Ella Clark	Polymer manufacturing integrated with controlled catalysis and automated property selection	Charlotte Williams
Jirui Zhang	Modular manufacturing platform for polymerization processes	Laura Torrente-Murciano
Yuan Gao	Understanding and controlling the making and unmaking of block-copolymers with self- regulating flow reactors	Ulrich Hintermair Gerrit Gobius du Sart (TotalEnergies Corbion) Clemens Minnich (S-PACT)

Appendices

Phase 1 Discovery Research Projects contd.

PDRA	Title	Project lead and industry contact(s)
Aniruddha Nag	Bioderived and biodegradable sugar-based polymers for applications in liquid polymer formulations	Antoine Buchard James Wickson (Croda) James Wilson (SYENSQO) Alias Al-Bayati (Reckitt)
Alexander Craze	Manufacturing Toughened Engineering Thermoplastics from Carbon Dioxide and Renewable Resources	Charlotte Williams Mike Kember (Econic)
Xuejian Yin	Self-amplified Glycan Harvesting for Diverse Glycoconjugates	Ben Davis Gustaf Hemberg (Scindo) SugaROx
Marcel Hidajat	Heterogeneous catalysts for diol synthesis from biomass	Matthew Rosseinsky Paul Collier (JM)
Guofan Xu	Continuous production of cellulose-cellulose microcapsules for oil encapsulation	Davide Mattia Giovanna Laudisio (Naturbeads)
Jiayu Wang	Current and future UK material flow and environmental impacts	Rick Lupton Tim Partington (DESNZ)
Oska Pugh	H2-driven bio- and chemo-bio- catalysis to unlock diols and acids from HMF and furfural	Kylie Vincent Sarah Cleary (HydRegen)
Zoe Miao	Prospective Life Cycle Assessment (LCA) for development of new materials and chemicals	Stephen Allen
Michael Higham	Valorisation of carbon dioxide through hydrogenation to methanol	Richard Catlow Ronan Bellabarba (TOPSOE)

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SCHEMA is a collaboration between













