



KNOWLEDGE CENTRE
**MATERIALS
CHEMISTRY**

Newsletter
2019

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Foreword from John Conti-Ramsden

The past year has seen important new steps for KCMC and its partner universities since being hosted by CPI. As part of the High Value Manufacturing Catapult (HVMC), CPI is tasked with helping the development and commercialisation of technologies at the higher Technology Readiness Levels (TRLs). The strategic partnership between KCMC and CPI is aimed at addressing how capabilities that underpin the future of UK manufacturing are developed, providing an essential bridge between the technologies developed in universities and the commercialisation activity of the Catapult in the field of advanced materials.

The Catapult network's mission is to deliver support for technology commercialisation, taking product ideas from the early innovation stage through to market. Due to their focus on the higher TRLs, it is difficult for the Catapult to stay connected with science and technology developments in university partners and SMEs. KCMC, however, operates within the early stages of this process. By working with some of the leading UK universities in materials chemistry, we can broaden and deepen the extent of CPI's relationships with thought-leading academics in the UK. This makes our relationship with CPI very complementary, with KCMC offering a high level of insight into how to work with universities in this field, and CPI providing a connection to the commercialisation activities of the Catapult.

In the past year at KCMC we have been developing new working relationships between our partners, with a focus on developing a better interface between industry and academia. A number of our academic partners have visited CPI in the past year, and members of CPI have also visited KCMC partners. This provides a huge benefit not only for universities, but also for CPI as it allows them to offer a more joined up approach to companies when dealing with new technologies.

It has been exciting to see how the transfer of hosting from the KTN to CPI in the past year has offered new ways of aligning the capabilities of the universities and the Catapult with the long-term needs of the manufacturing industry in the materials supply chain. We are still only at the first stages of building on this unique opportunity, but the possibilities are becoming clearer.

As a result, we are already starting to see more interaction between the catapult network and our university partners. We are now starting to look at how we build capability for the longer term, by starting the right dialogue between leading experts in universities and within CPI on the needs of commercialisation and the scale up of innovation. This offers clear benefits for our university partners as it provides them with more insight into the commercialisation process, giving them a better chance of success. We have also helped establish connections between early stage University spin-outs and CPI's Innovation Integrator® model, giving them access to expertise in the chemistry industry and ultimately improving their chance of success. In the last year, we have worked with three of our university partners using the Innovation Integrator® model.

Our partnership with CPI offers a huge area of opportunity to address the challenge of enabling innovation across global markets for advanced materials. In order to successfully address this challenge, some of the best minds from our university partners need to be joined together with our very diverse industry stakeholders, the Catapult network and CPI. In this way, we've got a great opportunity to make an impact and deliver globally competitive innovation in materials chemistry.



“In the past year at KCMC we have been developing new working relationships between our partners, with a focus on developing a better interface between industry and academia.”

John Conti-Ramsden
Director, KCMC

Welcome from the Chair of the Governing Board, Professor Rick Cosstick

It is an exciting time to be operating in the field of materials chemistry innovation, which is exemplified by developments at KCMC within the past year. These include a new strategic partnership with CPI and our continued relationship with research facilities such as the Henry Royce Institute. While there are numerous challenges within the sphere of materials chemistry R&D, we can help organisations to overcome these by working at the interface of academia and industry.

With the deadline for Brexit on the horizon, KCMC can help to guide organisations through any economic uncertainties. By brokering connections, expertise and facilities, we can support academia and industry in maintaining a competitive edge on a global scale. This will help organisations to realise the wealth of opportunities that are available in materials chemistry innovation in a post-Brexit world.

The increasingly fragmented materials chemistry R&D field is another challenge that we can help organisations to navigate through. By introducing smaller companies and start-ups to complementary research and industrial bodies, we provide access to a broad range of key stakeholders. This increased availability of expertise and facilities across the field of materials chemistry ultimately contributes to a more connected innovation ecosystem.

Looking forward, there are plenty of exciting future opportunities for KCMC to help deliver competitive materials chemistry innovation. We can play an important role in helping to strengthen the Research Excellence Framework (REF) score of partner institutions. Critical to determining REF is the measurement of impact that the research has on both industry and wider society. Best practice for achieving this is to facilitate the uptake of R&D by the chemical industry. Strong connections are an important part of this endeavour – KCMC can help to identify the right industrial contacts for research institutes to achieve this.

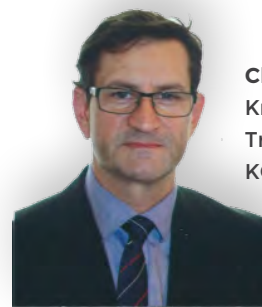
We are also currently expanding our partner base and increasing our geographical footprint, hoping to expand to partner universities in areas across the United Kingdom. By accessing more companies in these locations, KCMC can build connections to further strengthen the interface between academia and industry.



“KCMC will help organisations to realise the wealth of opportunities that are available in materials chemistry innovation in a post-Brexit world.”

Professor Rick Cosstick
Chair of the KCMC Governing Board and
Dean of the School of Physical Sciences,
University of Liverpool

Recent additions to the KCMC team



Christophe Brodin
Knowledge
Transfer Manager,
KCMC

Christophe Brodin Knowledge Transfer Manager (University of Manchester)

Last year we welcomed Christophe Brodin to the KCMC management team as Knowledge Transfer Manager. Based at the University of Manchester, Christophe's role is primarily focused on connecting industry with academia and facilitating their interaction. With a PhD in Polymer Chemistry from Université Laval and previous experience in both project management and product development, Christophe holds an excellent understanding of how academia and industry operate. This understanding and expertise are vital to effectively match the skills and knowledge of academics at the University of Manchester with the needs of the materials chemistry industry.

“ As a Knowledge Transfer Manager for KCMC, I am hoping to initiate successful collaborations and bring exciting ideas, concepts and innovations in materials chemistry to life. I understand the needs of academia as well as industry, which allows me to knowledgeably advise academics on what is required to effectively scale up a product and process for industry. ”

KCMC Industry Steering Group Meeting

The KCMC Industry Steering Group meeting (ISG) brings industry together with KCMC's research institution partners to network and develop a common understanding of the challenges facing materials chemistry innovation. Long standing collaborators of KCMC are welcomed to the meeting, as well as those that are new to KCMC and can bring new insights. This allows new members to find out more about how KCMC operates and what's happening in the innovation landscape, while refreshing current partners' understanding of innovation and the associated challenges.

The most recent ISG meeting, held in Birmingham in late 2018, welcomed representatives from 11 companies, the 6 KCMC research institution partners, and UK innovation leaders from Innovate UK, HVMC, CPI, and EPSRC. The meeting was themed around clean growth, a key part of the UK industry strategy challenge, with a number of presentations being given by companies on this topic. One such discussion, led by Dr Steve Brown from Scott Bader,

was focused on the challenges of making long fibre reinforced composites more sustainable through the development of better chemistries. Issues surrounding the development of new approaches to functional coatings, prototyping and scale up of model technologies, and how to better transfer technology between universities, catapults and industry were also discussed during the meeting.

As an interface between academia and industry, the ISG offers a proven approach to help the KCMC partnership stay aligned with the needs of UK companies that are using materials chemistry innovation to address global industry challenges. Supported by strong engagement from key stakeholders in Innovate UK and the High Value Manufacturing Catapult, the aim of the meeting is also evolving to help address new materials innovation challenges across UK supply chains, building on KCMC's core capabilities in the Catapult, academia and industry.

New strategic initiatives for KCMC

With many years of experience working in the knowledge transfer space, KCMC strives to advance the UK materials chemistry sector by encouraging and facilitating collaborations between business and academia. As part of a strategic objective to offer UK businesses the widest possible access to materials chemistry expertise in UK universities, KCMC has recently initiated a programme to look for new universities to join the KCMC partnership. The aim is to bring in two to three universities that extend KCMC's current geographical reach and add complementary materials chemistry expertise.

By investing in university-based research, as well as in the infrastructure and expertise available within the Catapults, the UK Government has established and supports two major elements of the UK innovation landscape. However, achieving effective translation of discoveries generated by university-based research into investor-ready products or processes is not simple (see Fig 1). As a consequence, not all discoveries make a successful transition into the innovation stage, meaning some do not obtain the level of investment required to achieve a manufacturable product or commercially viable process.

KCMC, together with CPI, is actively looking at how to connect those organisations operating in the materials chemistry space, to ensure that innovation is successfully translated out of universities and into the commercialisation space.

As part of this new activity, Mike Holmes, who has worked for KCMC since it was established in 2009, will work with key stakeholders on developing possible solutions to these challenges so that projects can reach the Catapult network smoothly and efficiently. Offering years of experience in facilitating connections between companies and the KCMC university partners, Mike will now focus on identifying and developing new university partners to join KCMC, and mechanisms for improving translation of discoveries from universities into the Catapults, ultimately contributing to UK GDP.

'KCMC offers companies a more joined up approach to translating discoveries out of universities and into catapults like CPI. However, industry and academia work in a different way and have different priorities, so the key to success is to manage this interface and facilitate collaboration' says Mike.

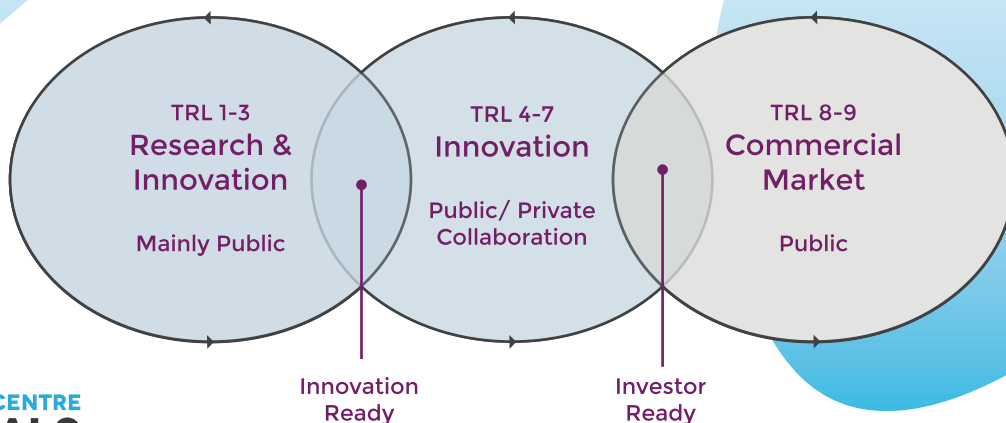
Mike will be working on new mechanisms to help the progression from discovery to innovation with Jon Helliwell, Performance Development Director at CPI. Having worked in this space for many years, they both have experience in complementing the existing business engagement activities in universities. This experience allows them to facilitate collaboration at the interface between academia, industry and the Catapults to ensure that the process delivers more value to all partners.



“KCMC offers companies a more joined up approach to translating discoveries out of universities and into catapults like CPI.”

Mike Holmes
Academic Development Support
Manager, KCMC

Figure 1



CPI's new business strategy advances materials chemistry innovation



Stuart Cornelius
Group Business
Development
Director, CPI

Exciting materials chemistry innovation opportunities are being created for KCMC through CPI's new market-focussed business development strategy. CPI works closely with partners to develop products and processes for a diverse range of markets, highlighting the importance of business development effectively serving all sectors.

The new strategy is shifting away from the previous approach, where business development teams were linked into their respective technology areas. Under CPI's old strategy, business development strategies effectively operated separately within the multiple markets that it serves. CPI's new business development strategy is now a standalone endeavour. Now, business development is carried out across all markets, being benchmarked to a common standard with the same protocols and objectives.

Led by Stuart Cornelius, Group Business Development Director of CPI, the new business development strategy is aligned with CPI's new market-focussed approach. This centres around the company's capabilities across a range of core markets, rather than the offerings of individual centres and platforms.

CPI's exciting new market-focussed strategy is set to facilitate horizontal innovation, which is the effective transfer of knowledge and technology from one sector to another. Horizontal innovation will provide important benefits for KCMC, helping to advance materials chemistry innovation. Due to the multifaceted nature of the materials sector, it often draws upon numerous capabilities from multiple areas of CPI and requires a diverse range of expertise, facilities and networks. Ultimately, new opportunities in materials chemistry R&D across a range of markets will be created from this transformative approach to business development.

Materials chemistry innovation through Knowledge Transfer Partnerships

KCMC is continuing to enable materials chemistry innovation through its strong links with the Knowledge Transfer Partnership (KTP) programme. This scheme helps businesses to maintain a competitive edge and improve productivity by transferring knowledge, technology and skills from the UK's academic and industrial ecosystem. KTPs are funded by UK Research and Innovation through Innovate UK, as part of the government's Industrial Strategy. Projects can last between one to three years and if awarded, support organisations with partial grant funding to offset the costs of their project delivery.

The KTP programme encourages economic growth and innovation. It provides specialist support via Knowledge Transfer Advisers (KTA), who facilitate the development of a Knowledge Transfer Partnership. The process is also supported by an appropriately qualified graduate (associate), who acts as project manager throughout.

KCMC uses its extensive links with both academia and industry to identify opportunities that fit with KTP funding, referring partners to the programme and helping to develop materials chemistry-based projects that are suitable for funding. Working closely with KTAs, KCMC can:

- Help businesses to identify appropriate academic partners
- Bring specialist sector and discipline knowledge to the table
- Create supply links to help with innovation activity
- Support partner organisations to fully explore their needs and further opportunities for funding to deliver successful innovation

The KTP programme works with innovative cross-sector companies of all sizes. In particular, it is a useful programme for the fast-paced materials chemistry industry. Companies that wish to gain an advantage in materials chemistry innovation can use the KTP to capitalise on the wealth of advanced UK-based infrastructure, resources and research capabilities.

Exciting current materials innovation KTP projects include: the development and exploitation of expertise in the process characterisation of functional materials to improve capabilities; the development of a high throughput method of manufacturing novel materials for global commercialisation; and the introduction of innovative asymmetric technologies for easier material synthesis.

Susan Suttle, a KTA who works with KCMC's partner organisations in the North West, said: "**KCMC allows us to ensure that we work with innovative partners who need our support, enabling us to grow the KTP in this strong industry sector.**"

Innovate UK Knowledge Transfer Network

If you are interested in how the KTP can support your organisation then please [visit the site here](#).

Follow the KTN on Twitter: [@ktnuk_ktp](#)

Success with Materials Innovation Translator programme

KCMC is continuing to strengthen its scope for knowledge transfer between academia and industry with its recently launched Materials Innovation Translator (MIT) programme. Supported by a £500,000 investment from the High Value Manufacturing Catapult, the programme places Project Scientists at KCMC's partner academic institutions.

The primary role of the Project Scientists is to deliver short term applied research that is industry focused and supports innovation activity for close to market products and applications. The flexibility of this approach creates an ideal platform for launching longer term collaborative R&D, de-risking transition of new products and services to higher TRLs with the input of materials chemistry led research.

The MIT programme provides some of the brightest early career materials science researchers with the opportunity to understand the interface between industry and academia. The work of the Project Scientists will accelerate the development of novel material chemistries toward scalable and economically feasible processes.

Exciting areas where projects are in development under the MIT programme include: the application of industrial biotechnology for sustainable materials development; new materials for application in composites; battery materials and functional inorganic coatings; and new approaches for developing fire-retardant materials.

Placed at the University of Liverpool as a Project Scientist, Dr Filipe Braga Nogueira is working on potentially disruptive technology for batteries and capacitors. The application of electrochemistry in energy storage has a huge potential to provide societal, environmental and economic benefits helping to address problems of intermittency and enabling future electric vehicles.

Filipe's time is split across two projects. The first project is focused on developing non-invasive integrated sensors within a battery device that can feedback information about the battery's health *in situ*. The second project is centred around improving batteries for electric vehicles by reducing range anxiety and boosting overall performance.

Filipe says: **"The MIT programme allows project scientists to gain insight into the steps needed for a new product in materials chemistry to be taken to market. My area of interest is in energy storage, and it is really exciting to be given the opportunity to work on the development and external validation of novel disruptive technologies in this industry."**

Dr Marion Specht, another Project Scientist, has been placed at the University of Southampton since June 2018. Her focus is on developing inkjet printing techniques to quickly and easily produce metal-organic frameworks (MOFs). There are a wide range of important applications for MOFs. These include the storing and transportation of gases, detection of counterfeiting and drug delivery.

One of greatest challenges facing materials chemistry innovation is developing novel products and technologies that are scalable, sustainable, and to an appropriate price point. The new funding support from the MIT programme enables Project Scientists to work with academia and industry to flexibly test the feasibility of important materials chemistry projects.

Marion says: **"Being placed at the University of Southampton's chemistry department is a great opportunity to learn how a technology could be transferred to an industrial setting. Academia and industry are usually two separate worlds; however with two visits to CPI, I am getting a unique insight into how they work together for R&D in materials chemistry."**



Project scientists' visit to CPI, November 2018

Project Scientists have been placed at:

- University of Bristol
- University of Liverpool
- University of Bolton
- University of Southampton
- University of Manchester
- STFC, Hartree

Accelerating materials discovery at the Materials Innovation Factory

In October 2018, the University of Liverpool's £81 million Materials Innovation Factory facility was officially opened by the President of the Royal Society and Nobel Laureate, Sir Venki Ramakrishnan. The facility is co-founded by the University of Liverpool, a partner institution of KCMC, and Unilever as part of the UK Research Partnership Investment Fund (UKRPIF). Housing academia and industry under one roof to foster mutually beneficial relationships, the MIF is creating a new template for collaboration that enables accelerated research and innovation.

The MIF is a unique open access facility with unparalleled state-of-the-art facilities and a dynamic support structure. The facility combines materials chemistry expertise with advanced computational and robotic equipment, and has one of the highest concentrations of materials science robotics in the world. The MIF's extensive expertise in automated

materials discovery has facilitated the development of the Formulation Engine, a bespoke robotic platform. Its ability to handle multiple workflows simultaneously enables a range of automated techniques to be flexibly incorporated into a research work stream. The MIF also houses the Leverhulme Research Centre for Functional Materials Design, which aims to accelerate the development of atomic-scale functional materials by collocating chemical knowledge with state-of-the-art computer science.

Research activity at the MIF includes Organic Materials, Inorganic Materials, Nanomedicines, Sustainability, Genomic Sequencing and High Throughput Formulation/Automation. The development of the De Novo Materials Design project is another example of the exciting research being undertaken at the MIF. This endeavour is focused on the development of computational methods that predict how molecules assemble to form crystals.



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Materials Innovation Factory at the University of Liverpool

Enhancing innovation at Bristol



Dr Sohail Hajatdoost
Knowledge Transfer
Manager, KCMC



As a KCMC Knowledge Transfer Manager based at the University of Bristol, Dr Sohail Hajatdoost works closely with academics in

the School of Chemistry to determine how the university's expertise and technology capabilities match with the emerging needs of industrial projects. Introducing a business to the appropriate academic expertise and relevant strategic funding systems offers a way to address the continuously evolving challenges facing innovation in materials chemistry. Sohail has a PhD in Analytical Chemistry & Materials Science and around 25 years of experience in senior technical research and development management in industry. His diverse knowledge of both industry and academia perfectly

positions him in his role to facilitate knowledge transfer and drive innovation at KCMC.

Sohail says: **"This is an exciting time for materials chemistry innovation across the UK. Here at Bristol University we are keen to engage in this innovation by initiating long-lasting strategic partnerships with industry. As an example, our department recently collaborated with a large company to help them update their chemical manufacturing processes. Once implemented, this new process will represent an environmentally efficient route of manufacture and will have considerable implications for the circular economy. This reflects the exciting potential of innovative projects in materials chemistry that are underway across all of KCMC's academic partners."**

Incubating materials innovation success at Bristol Unit DX



In late 2018, Anand Pogul, the Centre for Process Innovation's (CPI) Strategy and Innovation Manager, visited Unit DX in Bristol. Unit DX is a science incubator that accommodates transformative SMEs. Anand was invited to

present at the innovation centre by Dr Sohail Hajatdoost, a Knowledge Transfer Manager at KCMC embedded at the University of Bristol.

Sohail recognised how CPI's extensive expertise in commercialising technology could help Unit DX's SMEs take their products to market. KCMC's excellent network of academic institutions specialising in materials chemistry is highly beneficial for ensuring the success of potential collaborations between CPI and companies like the Unit DX SMEs.

Unit DX houses over 25 science-focused businesses, with companies specialising in fields related to materials chemistry innovation R&D, including smart electronics and nanotechnology. Moreover, Unit DX maintains strong links with a number of academic institutions, including universities across the South West of England.

In a talk attended by 15 companies, Anand introduced CPI's Innovation Integrator® model, which is a toolkit that enables SMEs to progress from innovation to commercialisation. The Innovation Integrator® model achieves this by carrying out a strategic capability review to identify existing knowledge, expertise and resource gaps within a business, technology, product or a process. CPI then uses the findings from this

analysis to provide suggested solutions to develop a robust innovation strategy and accelerate commercialisation. This enables SMEs to get to market faster while reducing the costs and risks associated with innovation.

The talk was a resounding success. As a result of Anand's presentation, numerous SMEs have expressed interest in collaborating with CPI, with multiple one-to-one engagement meetings subsequently being organised. This marked response highlights the current knowledge and resource gap facing materials innovation-focused SMEs in the South West. Importantly, it demonstrates how CPI can help to solve this issue with its ability to connect the innovation ecosystem.

Developing relationships with incubators in research areas such as materials innovation is a critical part of CPI's innovation strategy. CPI can leverage its proven track record and extensive expertise in important processes required to enable commercialisation, such as scale-up on an industrial scale.

Sohail says: **"Working as a KCMC Knowledge Transfer Manager with large and SME companies presents an exciting opportunity for me to facilitate innovation. I am able to link the expertise of academic institutions, such as the University of Bristol, and High Value Manufacturing catapults, such as CPI, with innovative companies in materials chemistry."**

Incubation units often have close ties with academic institutions. Consequently, KCMC can help CPI to foster these new relationships. KCMC's academic know-how and strong working relationships with a diverse range of materials chemistry research professionals can play a significant role in facilitating these collaborations.

Updates from the Henry Royce Institute

KCMC is continuing to accelerate materials chemistry innovation through its close links with the Henry Royce Institute, the UK's national centre for advanced materials. As the UK's flagship creating transformative new materials and systems, the Royce works with industry, academia, Catapults and funding bodies to accelerate the invention and take up of new materials systems that will meet global challenges, enhance industrial productivity and shape the world around us.

The Royce has R&D capability spread across the UK and operates as a 'hub and spoke model'. The 'hub' is at the University of Manchester and the 'spokes' are at the other founding partners; the Universities of Sheffield, Leeds, Liverpool, Cambridge, Oxford and Imperial College London, as well as the UK Atomic Energy Authority and National Nuclear Laboratory. Coordinating over 900 academics and £300 million worth of facilities, the Royce delivers beyond the individual capabilities of each Partner.

Each Partner champions a core research area, working collaboratively with other institutions to share facilities and expertise making a step change to research capability in the UK. The Royce has identified nine critical research themes on

which to focus initial activity ranging from Energy Storage, to Advanced Metals Processing and Biomedical Materials. The Royce is also collaborating on important materials chemistry research projects. One example is SUSTAIN, which is a £35 million manufacturing hub aiming to create a smart, green and clean steel industry. Another exciting research project is MIDAS, which is focused on chemically characterising and modelling the cladding of light water reactors to improve sustainability.

KCMC's extensive network of materials chemistry contacts from both academia and SMEs complement the Royce's existing arrangements for business engagement. Moreover, KCMC has worked with the University of Manchester for over nine years, fostering a close relationship with the Royce Hub and Manchester spoke which enables KCMC to support and deliver mutually beneficial collaborations.

The Royce has recently made a number of key appointments. These include hiring Professor David Knowles as the CEO in February, who has brought over 25 years' experience of materials research and commercialisation in academia and industry. Another important appointment was Dr Adrian Toland as Head of Business Engagement in November. Adrian's role is to oversee the promotion of the Royce to industry, and to develop industry-led transformative projects.

The Royce is working with both large and small companies to translate materials research into commercial applications and benefits. For example, the recent launch of the Accelerator Token scheme has created a huge amount of interest from SMEs. With this innovative scheme, tokens are awarded to support SMEs, reduce the cost barrier of exploratory projects and help to grow confidence for future collaborations. With the current scheme oversubscribed, the team at the Royce are looking forward to launching a second round of funding in the coming weeks.

If you are an SME or larger company with a materials technology or application challenge then contact the Royce to find out how you can benefit at info@royce.ac.uk



Henry Royce Institute

New Faculty structure at the University of Southampton likely to offer even stronger KCMC innovation links

As a result of the new Faculty structure introduced in August 2018 at the University of Southampton, KCMC can anticipate exciting new opportunities to further strengthen its links across multiple research disciplines that span materials chemistry innovation.

The newly formed Faculty of Engineering and Physical Sciences contains a complementary range of Schools spanning the science and technology spectrum, including Chemistry, Electronics and Computer Science, Engineering, Physics and Astronomy and the Zepler Institute for Photonics and Nanoelectronics, together with the research-led Web-Science Institute and the Southampton Marine and Maritime Institute. The strong synergy between these disciplines within a single faculty will help to further strengthen and accelerate research, including work focusing on material chemistries.

Ron Swart, Knowledge Transfer Manager for KCMC based at the University of Southampton, said: **“This is a very exciting development in Southampton, aligning key physical science and engineering skills in the development of novel materials. It will be of interest in several industry sectors and create new opportunities for collaboration with important industry partners.”**

Professor Ian Williams, Professor of Applied Environmental Science and Associate Dean for Enterprise within the new Faculty said: **“An important part of my role is to develop an enterprise ecosystem in order to respond to the Government’s Industrial Strategy. The structural reorganisation of the Faculty of Engineering and Physical Sciences will enable the University to encourage even**

more multi-disciplinary chemistry and engineering innovation, including that within materials science research.”

Through the new structure Ron will be able to widen the innovation network by aligning key physical science and engineering skills with material chemistries. To achieve this, he will work alongside both academic staff and researchers in Chemistry, as well as colleagues across the wider Faculty.

KCMC can now access a broader range of opportunities for interdisciplinary R&D relationships with academic and industrial partners located across the materials supply chain. Moreover, the new connections within the Faculty provide KCMC with greater visibility of the world-class facilities and expertise found at the University of Southampton. This will help to accelerate materials innovation between academia and industry, ultimately improving business performance for the UK economy.

There are a number of exciting projects focusing on materials chemistry innovation within the newly consolidated Faculty. These include developing novel strategies to process metalorganic frameworks (MOFs) into application-specific configurations, and the preparation of a wide range of MOF-based composite materials. Other work in areas that are pertinent for materials chemistry innovation include research investigating 2D materials, new porous catalysts and battery materials, as well as major activities in structure prediction, catalyst modelling and other aspects of computational modelling using the power of the University’s HPC systems.

“KCMC will help organisations to realise the wealth of opportunities that are available in materials chemistry innovation in a post-Brexit world.”

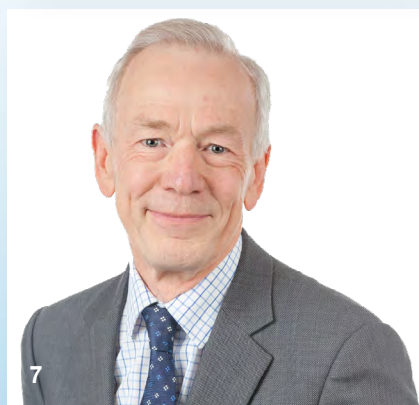


Ron Swart
Knowledge Transfer
Manager, KCMC



Ian Williams
Professor of Applied Environmental
Science and Associate Dean for Enterprise,
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