NanoManufacturing team create ground-breaking ultraflexible battery

Researchers from the NanoManufacturing group have created an innovative carbon nanotube structure which makes it possible to create extremely flexible batteries with superior performance. Shahab Ahmad, Davor Copic and Chandramohan George, led by Michael De Volder, have designed carbon nanotube (CNT) microstructures shaped like small cones, which are attached to a flexible current collector to create a battery. Tests showed that, from a performance point of view, CNT cone electrodes can actually outclass existing flexible electrodes in terms of flexibility. The applications of this ground-breaking product can be endless thanks to its thinness, flexibility and durability.

This project appeared in an article in the journal ‘Advanced Materials’, where you can find more information about the research: http://bit.ly/2dArxok

New report on High Value Manufacturing

ECS has published a new consultation paper looking at the UK’s High Value Manufacturing (HVM) landscape over the next 15 to 20 years has been issued.

Commissioned by Innovate UK, this new work builds on the 2012 High Value Manufacturing Landscape, taking into account new insights and capabilities that have been developed since the previous report and focusing more directly on the challenges facing manufacturing industries. The aim is to help the UK’s policymakers, manufacturers and researchers make decisions about how best to support the growth of HVM - an industry currently worth around £275 billion to the UK economy each year.

The interim report is available to view here: http://bit.ly/2dDV1nQ

CIS helps low-income entrepreneurs in Brazil find sustainable value

Steve Evans and Paulo Savaget (CIS) worked with FA.VELA, a non-profit organisation in Brazil which aims to develop skills and capabilities of residents of low-income communities, on their project RESILIENTE for accelerating existing and new sustainable businesses from low-income entrepreneurs in the Pampulha Lake Basin.

Steve and Paulo helped the project by designing and defining its scope, strategies and next phases; providing feedback about materials and methodologies for the acceleration process; meeting with the sponsors (Newton Fund from the UK Foreign and Commonwealth Office); and, together with Professor José Esteban Castro from Newcastle University, and members of FA.VELA, they conducted the kick-off workshops to help entrepreneurs design their businesses and find new opportunities for sustainable value.

For more information contact Paulo Savaget ps687@cam.ac.uk

CIS tool used in Ghana workshop

Ethical Apparel Africa, one of the innovative social start-ups used as case studies at the High-Value Business Models Symposium hosted by the CIS at the IfM in July, ran a workshop in Ghana using CIS’s Cambridge Value Mapping Tool. The participants, representing eight different nationalities and speaking 15 different languages, looked into two business goals: working on achieving an international quality standard in African clothing factories; and developing their sales strategy and attracting and keeping the right clients for the business. Keren Pybus, Co-founder and CEO, ran the workshop and CIS were pleased to see a successful cross cultural trial of the Cambridge Value Mapping Tool. Find out more about the The Cambridge Value Mapping Tool in the IfM Review Issue 5.

Andy Neely to speak at FT Future of Manufacturing Summit

Andy Neely has been invited to be a panellist at the Financial Times Future of Manufacturing Summit on Tuesday 4 October in London.

Andy will take part in the discussion: ‘Clusters, Knowledge and Innovation - Bringing Key Players Together’. The
panel will explore case studies, best practices and frameworks that create environments conducive to innovation in the manufacturing sector.

The panel also includes: Greg Conary, Senior Vice President, Strategy, Industry Business, Schneider Electric; Mark Gilligan, Chairman and CEO, Blacktrace Holdings; Bardia Pezeshki, President & Chief Executive Officer, Kaiam; and Zoe Webster, Head of High Value Manufacturing, Innovate UK.

**IP management teaching workshop**

Frank Tietze and a colleague from Chalmers University of Technology in Sweden held a workshop on teaching IP management to non-lawyers. The ‘IP management teaching workshop’ hosted 25 participants from Europe, US and Russia, both from academia and industry, who regularly teach or train non-law professionals such as engineers and managers. The workshop was sponsored by the European Patent Office, UKIPO and supported by the European Institute for Technology and Innovation Management (EITIM). A special guest was the EPO Chief Economist Yann Ménière, who gave an open talk about future IP challenges with particular emphasis on Industry 4.0 and standards.

**CIM presents keynote paper at OR58 Conference**

Jag Srai and Naoum Tsolakis (CIM) jointly presented a keynote paper at the Operational Research Society’s OR58 Annual Conference on the Sustainable Supply Chains stream at the University of Portsmouth. The paper ‘Exploring Opportunities for Circular Supply Chains Arising from Renewable Chemical Feedstocks’, authored by Naoum, Mukesh Kumar and Jag, was well received by academics and practitioners alike who attended the Conference, leading to an interesting discussion on circular supply chains.

**CIS project aims to make industrial waste in Sri Lanka into high-value products**

CIS is working on a project funded by the EPSRC Global Challenge Research Fund to transform Sri Lanka’s apparel manufacturing waste streams into high-value products through introducing innovative remanufacturing processes and designing new business models. The Centre's High-Value Business Tools will be used to work with Sri Lankan apparel manufacturer, Expo Industrial Engineering (EIE). A collaborative, open innovation lab will be built locally to conduct experiments and pilots with waste from its partner factories to contribute to the economy and society of Sri Lanka. For more information contact Ian Bamford imb31@cam.ac.uk

**Awards**

Congratulations to Maria Cristina Rodriguez Rivero (IRC) who won the 2015 Best Journal Paper award from the Society of Imaging Science & Technology (IS&T). It was awarded at the NIP32 Printing for Fabrication 2016 conference in Manchester.

**ACPMM alumni celebrate 40 years in Manufacturing**

The annual IfM Alumni weekend was held on Saturday 24 September. What made this event even more special was the presence of eight out of 18 of the ACPMM Year 10 Alumni who completed the course in 1976. They celebrated 40 years from taking the course and Simon Pattinson, current ISMM course director, was among them. ACPMM started in 1966 and was the forerunner to the current ISMM programme.

Some of the group had never seen the old buildings in Mill Lane, let alone the new IfM here in West Cambridge before attending the Alumni event. In long standing tradition they ‘borrowed’ a Course minibus and headed off to Cambridge Manor nursing home where Geoff Gardiner is sadly a permanent resident. Older members of the IfM may remember that Geoff was a researcher here in the 1990s and was lead author on the workbook ‘Speeding New Products to Market’.

The group also went punting – the river has not changed much in 40 years, but the punters certainly have.

The Group including partners ended up at Chez Pattinson for dinner and more reminiscing. As a real touch of nostalgia Margaret Sharman, widow of Mike Sharman, the founding Course Director of ACPMM, joined them. The Sharmans lived in Foxton for many years and reunions often ended up in their house (with the old Rolls Royce and endless railway memorabilia). It’s a small world – Margaret became Simon’s new neighbour a month ago. As midnight approached everyone agreed that ACPMM Y10 was a vintage year with still many more drinking years ahead. Forty years – and it seems like yesterday – definitely something to do again!
New Exec Briefing from CSA

CSA has issued its latest Executive Briefing: ‘Feedback from the Frontline: Engaging front-line employees in service innovation’. CSA researchers set out to construct a framework to allow organisations to tap into a rich source of knowledge about their customers - their front-line employees (FLEs). Download the briefing here: http://bit.ly/2dd6mcn

New book: value networks in manufacturing

CIS has published a new book: ‘Value Networks in Manufacturing Sustainability and Performance Excellence’. The book furthers the understanding of sustainable manufacturing from the perspective of value creation in manufacturing networks, by capitalizing on the outcomes of the European Sustainable Value Creation in Manufacturing Networks (SustainValue) project. The SustainValue Project which concluded in 2014 was focused on new industrial models for sustainable and efficient production. It was funded by the European Commission’s Seventh Framework Programme (FP7) and involved collaboration across six research and four industrial partners. For more information visit http://www.sustainvalue.eu/

New people

Robert Driver has joined as the Marketing Officer for ECS. In this role he will have the responsibility to develop and implement marketing plans to build the ECS brand and generate new business. Robert previously worked for Cambridge University Press as a Marketing Executive, responsible for marketing 40 journals to academic and industry contacts. He has over seven years’ experience in marketing roles, working across a range of sectors including education, not-for-profit and government.

Lorraine Gibbs has joined ideaSpace South as Membership and Office Manager at the newly opened office on the Addenbrookes site. Lorraine previously worked at TWI - The Welding Institute, as a Membership Administration & Finance Manager. Prior to this she held a number of management positions in a high street retail bank.

Kensuke Takagishi is a Master’s student at Waseda University in Japan. His Bachelor’s thesis focused on Surface finishing for 3D printed structure supervised by Associate professor Shinjiro Umezu. He is developing variety products utilizing printing technology.

In the IfM he is researching sensor device utilizing carbon nanomaterials and paper, supervised by Michael DeVolder and Ronan Daly. He is a member of St. John’s College

Cleonir Tumelero joined CIS as an academic visitor. He is a third year PhD student in the field of Technology and Innovation Management from University of São Paulo (USP) in Brazil.

Until the end of November he will work with Steve Evans. His PhD project is concerned with the influence of the cooperation in R & D on the introduction of eco-innovations in companies of the electro-electronics sector. Cleonir has a Master’s degree in Administration from University of São Paulo. He is Administrator, also specialised in Administration from Fundação Getúlio Vargas (FGV). He has academic experience as professor on subjects in the field of entrepreneurship and innovation in Brazilian universities. His practical experience as consultant is in sustainability and innovation of multinationals operating in Brazil.

Seminar: Countering Deservitization through Service Innovation
7 October from 10.30am, IfM
Presenter: Dr Scott E. Sampson, Thorsell Professor of Service Operations, Brigham Young University, Utah, USA
Manufacturing firms are engaging in servitization in order to increase revenues and strengthen ties to customers. Still, many more firms are decreasing the service components of offerings in what we might call deservitization. This seminar will review the inevitability and peril of deservitization and discuss how its threat can be countered through effective service design and innovation.
To register please email Holly Shaw has50@cam.ac.uk

Publications

To ensure your publication is listed in the future, please make sure they are added to: www.openaccess.cam.ac.uk

CIS
http://www.repository.cam.ac.uk/handle/1810/259999

NanoManufacturing
http://www.repository.cam.ac.uk/handle/1810/260157

IfM in the news

Reaping the rewards of innovation
The Manufacturer
David Probert shares his views on innovation and warns that failing to innovate can condemn companies to the slow lane.

Cambridge template for UK to leverage high value manufacturing edge
Business Weekly
IfM’s report outlining the UK’s high value manufacturing landscape over the next 15 to 20 years identifies a roadmap to advancement that could be vital to sustain and grow the national economy post Brexit.

Cambridge machine learning business raises £1.6m from global funders
Business Weekly
ThisWay Global, a technology company based at the ECS-managed start-up hub ideaSpace, has secured £1.6 million funding to develop its machine learning-powered recruitment software.

Blocks to smart construction revealed
Smart Cities World
The Construction Leadership Council’s (CLC) Innovation in Buildings workstream has published a new report following a roadmapping workshop facilitated by ECS.