GIBSON INDEX NEWSLETTER

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Your Monthly e-Newsletter on British Enterprise and Innovation

Welcome to the UK's most comprehensive and best-read Newsletter on Small Technology Companies, Academic Enterprise and Latest Innovation

At last - the Technology Strategy Board has listened, and acted...

Unveiling its 'new' strategy – on a busy Saturday for some unknown reason – the nine-year-old TSB says it will 'significantly increase its help to SMEs'. After years of cloth-eared behaviour the TSB has begun to increase the funding for the only scheme of any national importance that it runs – the **Smart Award** scheme.

Funding for Smart grants will rise to £50m in 2014-15, up from £40m in 2013-14. We are still not satisfied.

As the UK economy's future rests very largely in the emergence and development of super SMEs, the Smart award funding *should be increased to £200m*. Yes, really... Why? The old **DTI's Smart Award scheme**, run by true technology experts who really knew what they were doing, ranks as the most successful wealth creation scheme of the post-war era – bar none.

Today's Smart provides pre-start-ups, start-ups, micro businesses and SMEs with vital product development grants that enables them to assess potential markets and invest in R&D and innovation. It is aimed at those SMEs with high growth potential.

TSB head **lain Gray** said "The Smart grants programme is a real winner with every £1 invested returning £9 to the UK economy. It is very good news that we see commitment towards Smart strengthening to further meet the huge demand out there for this exceptionally popular grant programme."

Secondly, and about a decade after we tried unsuccessfully to get **NESTA** to set up a business angel networking interface with applicant companies – the TSB is to set up an 'online platform that will showcase small innovative businesses seeking investment to suitable investors who are looking to invest in high-growth SMEs'.

It states 'Those companies with a Technology Strategy Board award and who are interested in equity investment, will therefore be accessible to potential investors. This will be established in conjunction with the **British Business Bank, Growth Accelerator** and the **UK Business Angels Association**'.

It took nearly five years to get the first definitive list of SMEs to have received awards from the TSB – after much gnashing of teeth, a poorly detailed document was delivered. Worse still, we calculate that around half of the SMEs involved in the TSB's ill-fated **IT SME programme** cannot now be found. What happened is a mystery. How much money was lost in this escapade is unknown – but thankfully it is only **Smart** that really counts.

www.gibson-index.com

The Newsletter is compiled and edited by **Marcus Gibson**, former *Financial Times* technology correspondent, who has been covering enterprise and innovation for more than 20 years. The Newsletter aims to highlight developments in at least 100+ companies each month. It is derived from the wideranging news-gathering operation that produces the **Gibson Index SME database**, which now contains profiles on more than 49,000 UK-based technology SMEs.

To subscribe to the newsletter: please go to www.gibson-news.com/subs.html

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COMPANY OF THE MONTH

sureCore Ltd's electronics promise 'significantly lower' power consumption

sureCore Ltd was set up in June 2011 in order to understand the challenges facing the industry as it moves towards sub-28nm technologies and the problems caused by atomistic variability. Working closely with the world acknowledged experts in this area **Gold Standard Simulations**, a **Glasgow University** spinout, sureCore has assembled an impressive engineering and management team.

sureCore Ltd is a semiconductor IP company based in Sheffield, focusing on low power physical IP for next generation silicon process technologies. In May 2013 sureCore Ltd has announced that it has secured a **Technology Strategy Board** Smart award of £250,000. The new money will help realise the company's low power SRAM technology in a leading edge next generation silicon process node. One investor is the **Finance Yorkshire Seedcorn Fund**.

Working with the major foundries developing FDSOI and FinFET technologies, the grant will be used to contribute to the development of a demonstrator chip that will be used to showcase sureCore's patented array control and sensing scheme.

sureCore says its SRAM memory consumes – it says – less than half the power of existing solutions'. **Paul Wells**, CEO of sureCore, said "We have proven the technology in simulation but to fully characterise and demonstrate its benefits implementation in silicon is a must. This is a critical next step in demonstrating the value of our IP to our customers."

The company's chairman **Guillaume D'Eyssautier** was, most recently CEO of **ADD Semiconductor** which he sold to **Atmel** in October 2011. Prior to ADD he was CEO of **picoChip**, sold to **Mindspeed**. Glasgow University **Prof Asen Asenov** is a founder and CEO of Gold Standard Simulations (GSS) Ltd.

Duncan Bremner, CTO, spent 17 years at **National Semiconductor** in product development, becoming the corporations youngest Member of technical staff before leaving to establish **Intel's** high speed development centre for global communication products in Glasgow. CEO Paul Wells worked in the semiconductor industry for over 25 years including two years as director of engineering for **Pace Networks**.

Contact: www.sure-core.com

SME NEWS - ENGINEERING, CONSTRUCTION & ENERGY

Advanced Actuators expands turnover by 40 per cent after expanding overseas

The **Silsden**, West Yorkshire-based firm, which manufactures electro-hydraulic actuators for sectors including oil and gas, power generation and steel production, said it saw turnover rise to £3m in the year to the end of September 2013. But turnover for last month alone has already reached £2.36m.

The company was founded near the centre of Bradford in late 1999. It moved to its current purpose-built premises five years ago after outgrowing its previous premises.

Customers include **BP, Shell, British Nuclear Fuels, EDF Energy, Eon, Tata Steel, Lafarge** and **Thames Water**.

Exports are a major driver of growth, with over 50 per cent of current business secured through export. The company recently promoted two members of staff, who have over 20 years combined experience with

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the company, to director level to help sustain further growth.

Advanced Actuators is targeting the Middle East and Far East for future expansion. MD **Chris Woodhead** said: "Recent promotions mean I can take on a greater role expanding the Advanced Actuators portfolio in the Middle East and the Far East which is where we anticipate a further 20 per cent growth in 2014."

He added: "While our 2012-13 financial year was exceptional, we have secured 80 per cent of last year's turnover just one month into our new financial year. This is a significant growth period for Advanced Actuators and we anticipate further job creations at home and overseas, in the coming months."

Contact: http://advanced-actuators.com

Innomech's automation equipment to be used in high profile projects

First, the equipment will be used to assemble fuel cell stacks for one of the world's largest alkaline fuel cell power systems. This is being installed at **Air Products** industrial gas processing plant in **Stade**, **Germany**. The first of two KORE systems is due to be installed in 2014 and the plant will generate a total of 500 kW electrical output when fully operational. The same company's hydrogen production plant in Rotterdam, The Netherlands was opened in February 2012.

In addition, automation company Innomech will develop automated manufacturing equipment to assemble fuel cell stacks for **AFC Energy's** £4.9 million EU-backed Power Up programme.

This is part of a £4.9m EU development grant that will enable AFC Energy and the **Power Up Consortium** to develop and install commercial-scale energy generation plants using hydrogen as a fuel source.

The work includes the development of automated equipment to dismantle stacks at the end of their working life, allowing key components and materials to be recycled and reused.

Immotech commercial director **Tim Mead** said "Innomech has always been committed to minimising the environmental impact of its own business so we are delighted to be involved in such a high profile, clean energy project."

Contact: www.innomech.co.uk

UK Government gives £1m to key Motorsport Valley's leading SMEs

The **Technology Strategy Board's** Motorsport Valley Launchpad competition has awarded £1.14 million to 15 innovative companies from the cluster. Unfortunately, instead of being spent on core engineering and product development, the money will 'support development of low emission, energy-efficient technologies with applications across other engineering sectors'.

With around 3,500 SMEs **Motorsport Valley** is home to around 75% of global motorsport R&D, and provides innovative high performance solutions to many of the world's major motorsport series, from Formula 1 and the World Rally Championship to NASCAR, Indycar and beyond.

One winning SME, fuel cell manufacturer **Proton Power Systems**, recently launched a solar storage product, the SPBS3000, which will help systems store power so it can be released at night when demand and power costs are higher.

Proton chairman **John Wall** said "This product solves an acute problem for existing and future solar systems where power is generated during the day and sold to the grid at a discounted rate and then has to be purchased back from the grid in the evening at full commercial rates."

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The remaining 2013 Motorsport Launchpad winners are:

- Advanced Fuel Systems Ltd (<u>www.advancedfuelsystems.co.uk</u>) manufacture lightweight flexible safety fuel tanks for vehicles used in vulnerable situations. These are lighter than the current tanks. This project reviews the feasibility of creating new lightweight fuel cells for the motorsport industry
- Axon Automotive Ltd (www.axonautomotive.com) design and manufacture lightweight vehicle structures and whole vehicles based on carbon fibre technology. The current project sees the company working with a large motorcycle manufacturer to develop a lightweight framework using 'Axontex', a specialist material, to deliver high performance
- Equipmake Ltd (<u>www.equipmake.co.uk</u>) working with Delta Motorsport (<u>www.delta-motorsport.com</u>) to design a new 'inverter' converting direct electrical current (DC) into alternating current (AC) to efficiently deliver electrical power for low-volume production applications. This will allow hybrid systems to be used in motorsport and low-volume niche vehicle manufacturing
- Flybrid Automotive Ltd (www.flybridsystems.com) develop low carbon vehicle technology using a Kinetic Energy Recovery System (KERS). This project will develop an entirely new high-speed flywheel-based racing Kart that has no electrical connection to the vehicle. This entirely mechanical control system is key to achieving the very low unit-cost target necessary for success in this very low cost form of motorsport
- Lyra Electronics Ltd (<u>www.lyraelectronics.com</u>)

 working with SMT Developments Ltd (<u>www.smtdevelopments.co.uk</u>) developing fast charging systems for race vehicles using either grid supply or stationary generators.
- **Juno Racing Cars** (<u>www.junoracing.co.uk</u>) design, manufacture and supply specialist racing cars. This project will deliver a composite chassis and crashbox that will be used in both a new sports prototype racing car and a roadworthy car that are both stronger, lighter than current vehicles
- **KW Motorsport Ltd** (<u>www.kwmotorsport.com</u>) developing a new approach to delivering a low cost carbon fibre intensive chassis platform making it more cost-effective to produce automotive vehicles
- Oxford nanoSystems Ltd (http://oxfordnanosystems.com) develop radiator systems for internal combustion engines for initial deployment in the motorsport industry. The project will apply new nanoengineering techniques to race car radiators in order to increase heat transfer, improve cooling, and reduce fouling
- Race Technology Ltd (www.race-technology.com) design and manufacture high technology electronic systems for vehicles and moving objects. These products are primarily for use in motorsport and road car development, but have been used in applications as diverse as mammal tracking, helicopter tracking, elite sports performance measurement and the safe transportation of premature babies. It will be working with EPM Technology for this competition.
- SS Tube Technology Ltd (www.sstubetechnology.com) design and manufacture high performance exhaust systems and heat shields for the motorsport and automotive market. This project will develop a lightweight insulation product with high structural performance at low thermal conductivity and low cost
- **Weald Technology Ltd** (<u>www.weald-evt.co.uk</u>) responsible for design, engineering, and lean manufacturing across a range of high-technology sectors, with a particular focus on sustainable transport. The system under development includes a unique drivetrain that will deliver an almost instantaneous 1,000 horsepower in a drag-racing motorcycle. Its winning project has been in collaboration with **GEM MC** (http://gemmc.com) and **Lyra Electronics**.

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SME NEWS - ELECTRONICS & TELECOMS

Accutronics Ltd returns production back from China - the first of many?

During the past 12 months it has launched three innovative battery product ranges under its Entellion brand – the credit card batteries, its intelligent power vault (IPV) and VR420 lithium ion smart batteries.

Accutronics manufacture bespoke rechargeable batteries for specialised applications in healthcare, security and defence among others. This range of complex applications has driven the need for innovation in both design and manufacturing processes.

Rob Phillips, MD of Accutronics said: "Since the company was established in September 2009, we've brought manufacturing back from **China** to the UK and created a successful & growing technology business that exports over 90% of its products to more than 30 countries – a tremendous achievement in just three years."

The company spends 10% of turnover and over 25% of its staff on innovation, and it has successful collaboration projects with Universities – a critical part of ensuring its products are innovative and world class.

The **Staffordshire** based company was only established in 2009 but in that short time has become a UK hub for delivering the latest battery technology to OEMs worldwide.

The company's customer focused R&D capabilities are what differentiates them in the marketplace. One of their recent innovative projects is the 'Intelligent Power Vault'; a transportable multi-battery power source that provides a high level of power without incurring special shipping requirements when in transit.

Contact: www.accutronics.co.uk

North East's IPO success Kromek Group secures orders worth almost £4m

Formerly known as Durham Scientific Crystals, the business started as a spin-out from Durham University spearheaded by a team of two in 2003. Today the 100-strong firm, based near Sedgefield with offices in the US, last month raised £15m in an over-subscribed fundraising, with shares admitted at 51p each soaring to a high of 59.8p by the end of trading on the first day.

Kromek Group plc has now grown to be a world leader in colour imaging for x-rays, facilitating advances in areas like cancer detection, airport security, industrial inspection and space exploration.

Less than a month after its first day on the AIM market, the business received an order worth in excess of \$990,000 (£617,300) to supply its specialised Cadmium Zinc Telluride (CZT) detectors to a medical manufacturer, who will include Kromek's technology as they build equipment for the health market.

A letter of intent was sent in by the customer, an American manufacturer, now been converted into a solid order, the majority of which is expected to be completed and delivered in the current financial year.

Kromek has also announced it has received its first \$1m (£623,000) from a CT (computed tomography) scanner manufacturer, as first-year payment for a £3.3m mutually-exclusive development contract.

Contact: www.kromek.com

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Supplier of ID cards moves to larger premises to add capacity for further growth

Digital ID Ltd has moved to new 15,000 sq ft facility at Unity Way in Stockport to support an increased demand for its services. The new site will house back office functions as well as a warehousing and distribution centre

The firm supplies all-important ID and access cards nationally to schools, colleges, hospitals, local authorities, as well as **BBC**, **HMRC**, **Mercedes**, **Nike**, **Ford**, **Nintendo** and **Honda**.

This year they began selling the next generation of membership IDs called **Miband**. These access wristbands are aimed at healthcare facilities and allow members to access through turnstiles, entrance doors, locker, and can be used with fitness equipment to record workouts. It has sold 100,000 of these projects.

It also supplies organisations with ID card printers so firms can print their own in-house.

In the last 12 months, revenues have increased 25 per cent to £6.2m and the firm expects this to rise to £7.75m by the end of 2014 and £16m in the next five years,

Digital ID, which was established in 1994 and employs 57 staff, has recruited 10 people in the last 12 months under its apprenticeship scheme, with plans to employs a further 10 staff over the next year.

MD Jonathan Fell said: "Our success is also, in no small part, down to our talented and growing pool of apprentices who have brought considerable enthusiasm, talent and passion to the business. The access control market continues to develop as security solutions become more and more sophisticated."

The firm is also seeing strong growth from its trade division, which it launched in the summer, providing services to other ID card providers in the UK. In 2011 it started supplying to customers overseas. Africa is moving away from laminate cards to plastic cards and there is a growing demand for services in Europe.

Contact: www.digitalid.co.uk

Japanese firm Maruwa Europe Ltd expands manufacturing operations in Ashford

Ceramic and electronics component manufacturer Maruwa has bought the plant, machinery and intellectual property from Midlands-based **Sarantel Ltd**, which went into administration in June. It is expected the move will expand Maruwa's manufacturing work at its European headquarters in the **Orbital Business Park**, Ashford.

Maruwa manufactures ceramic and electronics components in Kent. Sarantel manufactured antennae equipment for telecommunications devices until it ceased trading this year. The exact impact on employment in Ashford is expected to be made public before the end of the year.

Maruwa were advised on the acquisition by Maidstone-based law firm **Brachers**.

Partner Sean Gorman said: "This acquisition is a significant step in Maruwa's ambitious plans to grow their operations in Europe. The additional plant and machinery will help them build on operations at their Ashford site, and demonstrates their commitment to invest in the Kent headquarters of their European operations. The deal had a number of complexities and required significant negotiation, especially in relation to the intellectual property acquired."

Contact: www.maruwa-q.com

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SME NEWS - CHEMICALS, MATERIALS & ENVIRONMENT

Innovia Films 'front-runner' to supply the new UK banknote material

The Bank of England recently announced that it will change banknote material from cotton-based banknotes to polymer after 2016 – prompting speculation about possible suppliers.

If the decision is made to switch to polymer the Cumbria-based firm **Innovia Security**, a subsidiary of **Innovia Films**, supplies the trademarked Guardian polymer substrate for banknote printing to 23 countries, including Australia, Mexico and Canada. The substrate itself is manufactured in Australia.

The company would not confirm or deny its involvement with the Bank of England's move to polymer banknotes. A spokeswoman said: "We are pleased that the Bank is seriously considering polymer, but at this time we are not in a position to make any further comment."

Innovia Security was originally founded as **Securency International** in 1996 as a joint venture between Innovia Films and the **Reserve Bank of Australia** (RBA). In March this year Innovia paid £43.3m for RBA's 50% stake in the business giving the Cumbrian firm 100% control.

In November 2013 Innovia Films announced a £20m investment at its UK site, to boost capacity for biaxially oriented polypropylene (BOPP), the base film used for its Guardian substrate, as well as a new gas turbine. The work is scheduled for completion by 2015.

Contact: www.innoviafilms.com

Little known Manrochem makes a name for itself in managing process systems

The company, based in Huddersfield, has created a reputation for designing, building and managing process systems for manufacturers around the world.

International process engineering specialist **Manrochem Ltd** has enjoyed signal success since its formation in 1990 – and has been particularly active this year following a management buyout in February.

The management team comprising **Edward Jennings**, business director; **David Wakefield**, technical director; and **Andrew Pearson**, engineering director, have been collectively involved in Manrochem Ltd for over 30 years. Today, it employs 14 people in the UK and also has a subsidiary company in Chennai in India

With skills based in process engineering, the business delivers specialist design, build and commission projects across the chemical, pharmaceutical, food and allied industries and boasts a blue-chip client base including companies such as **Syngenta**, **Lubrizol**, **Glaxo Smith Kline**, **3M Healthcare**, **Rhodia UK Limited**, **Thornton & Ross**, **Finlay** and **Deltech**.

Mr Jennings said the company had landed major contracts with the **Airbus** factory at Broughton and **Rolls-Royce** in Derby as well as carrying out design work for a major tea producing facility overseas.

He said: "Our specialism is early stage definition – identifying and quantifying future options from a single process to an integrated complex. Manrochem actively engages in solving problems that our competitors shy away from and we work with and give advice to a plethora of UK and international companies."

Contact: www.manrochem.co.uk

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PlasRecycle builds first facility for reprocessing polythene bags and packaging films

PlasRecycle's new high tech plant will also create 32 jobs, a useful boost to the local economy in Woolwich, south east London. The plant should be fully operational in 4th quarter 2013 and is sourcing feedstock from waste companies and retailers.

The plant can process 20,000 tonnes per year of used plastic films, to produce a clean plastic granulate with multiple uses including in the manufacture of new black sacks and carrier bags.

PlasRecycle has spent the last three years developing a high tech proprietary process which is environmentally friendly and converts what has historically been regarded as a waste material into a useful product.

The company also raised £10.7 million in finance from investors including **Foresight Environmental Fund, the London Waste & Recycling Board, WRAP** and private investors.

The plant will to produce a plastic granulate that can be used for making new bags, replacing virgin materials. **Duncan Grierson**, PlasRecycle's founder and chief executive, said: "This pioneering project is a UK first and as well as recycling bags back into a high quality plastic pellet for reuse, we are creating over 30 new "green" jobs. Scientific research by the **Environment Agency** confirms that polythene carrier bags have a much better carbon footprint than alternatives such as paper bags."

Contact: Duncan Grierson - dgrierson@plasrecycle.com - 07855 403 910.

Wallpaper printer The Surface Print Company invests in new printers

The two wide-format printers will enable it to enter the booming market for digitally-printed wallpaper. The family-owned business, which is the UK's only flock wallpaper manufacturer, has bought a 3.2m wide **HP Latex** 3000 printer to allow it to produce one-off and bespoke digitally-printed wallpapers and a 1.5m wide Latex 260 printer.

Abigail Watson, sales director, said that while the Latex 260 had originally been bought to provide samples for the Latex 3000, it was also being used to provide a quick sample service for the firm's traditional wallpapers.

Watson said that while digital was still very much a niche market in wallpaper printing, it was growing and had a number of unique benefits versus traditional wallpaper printing.

"We're finding that our customers, who already print using a wide range of our textural techniques – like flock and beads – are starting to print digital. At the moment it's a small market and it will never replace something like flock or beads because it can't give the texture, but it certainly is a growth market and it has the benefits of no maximum colours and no repeats," she said.

Watson added: "Our traditional business is mainly done on non-wovens and we also print a lot onto foils now. We can print the same substrates with the digital printer, but it gives us more flexibility on widths versus our traditional presses, which print the standard 52cm or 68.5cm widths. With the digital we can print any width up to 3m."

According to Watson the total investment in setting up the digital suite, including the equipment, digital front end, software, building works and air conditioning was around £400,000. The firm has also taken on new staff as a result of the digital investment and general growth.

Contact: www.surfaceprint.com

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FMC Chemicals Ltd win 'Operational Excellence' at NW Chemicals Awards

In late 2013 the company scooped not one but two categories at the NW Chemicals Awards. The judges commented that "close management of 'pinch points' and bottlenecks in the FMC Chemicals' manufacturing process, along with more traditional techniques for improving manufacturing excellence, has led to substantial improvements in equipment effectiveness and vessel occupancy levels. So much so, that the Bromborough site now plays a greater strategic role in corporate manufacturing planning."

The **Health Safety & Environment award** was also awarded to FMC Chemicals. The judges said "An amazing journey of continual improvement in health, safety and environment performance made this entry outstanding. Success centred on **FMC Chemicals'** major commitment to employee engagement which has delivered significant positive results in reducing incidents and making the business more sustainable."

Contact: www.fmcchemicals.com

SME NEWS - BIOTECH, PHARMA & MEDICAL SCIENCES

Exeter's Certus Technology to lead EU's bone disease collaboration

Certus Technology will be responsible for designing, building and supporting software systems to enable the research partners to share and manage the huge amount of complex data which will be gathered during the course of the project.

The work is expected to be worth around £440,000, enabling the company to recruit two or three more people with software engineering skills, which MD **Ian Bamsey** said are in short supply in the Exeter area.

The Exeter-based IT company is to play a crucial role in an international research project which could lead to a breakthrough in the treatment of a wide variety of bone diseases.

Certus Technology is one of 18 partners across Europe who have joined forces for the five-year, £10m study funded by the **EU**. Established in 2000, the company specialises in databases, with a particular focus on healthcare and life sciences. It employs eight people, with an office in Longbrook Street and another in Sheffield.

Ian Bamsey said: "The tasks involved are so complex that it's only by having funding at a national or international level that brings together enough resources and enough people to give the project a critical mass and really make progress. We have a long association with some of the partners in the project. One of the criteria when the European Commission invites bids for funding is that the project must involve SMEs, so that's where we fit in. We are the only SME in the UK involved."

Named **SYBIL**, the project is led by **Michael Briggs**, professor of skeletal genetics at **Newcastle University**. It will look at the genetic causes of hundreds of bone diseases, including arthritis and osteoporosis. Those involved hope the work will lead to breakthroughs in the treatment of these diseases, which affect tens of thousands of people in the UK and across Europe.

Contact: www.certus-tech.com

NovaBiotics flagship product moves closer to cracking a global market

Aberdeen-based **NovaBiotics** has spent nine years developing a brush-on treatment for a medical condition, nail fungus, affecting more than one in 10 people throughout the world.

Deborah O'Neil, CEO and CSO of NovaBiotics, joined the European Biopharmaceutical Review team

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as Editor. NovaBiotics sponsored the main event at the October 2013 **Orphan Drug & Rare Diseases Conference** in London.

The US market alone is expected to be worth about £2bn a year by 2020 – possibly resulting in lucractive payments to NovaBiotics and its **Novexatin** product.

Earlier, in May 2013, Worcester-based **Malvern Cosmeceutics** and NovaBiotics Ltd announce a collaboration to develop proprietary treatments for rosacea, acne & other skin conditions. Combining NovaBiotics novel anti-infective peptides and Luminaderm polymers with Malvern's bespoke Lipodisq delivery system, the partnership has already generated stand-out preclinical data.

It stated that its newly developed rosacea product candidate had 'outperformed' the existing treatment metronidazole – and it was at least equivalent to erythromycin in its activity against the bacteria that are associated with this condition.

Both companies hope to progress these products and market them with the most appropriate dermatology-focused commercial partners.

Contact: www.novabiotics.co.uk

ThermaVein's beauty treatment product 'cuts the appearance of veins'

In August 2013 its product expects to deliver profits of £2m within 18 months on the back of strong overseas sales. ThermVein, which has been developed by Bolton surgeon **Dr Brian Newman**, involves the use of an electric charge to reduce or eliminate the appearance of spider veins and fine thread veins. It is used in spas, high-end beauty salons and dentists. Thermavein is the sister device to **Veinwave** and is designed specifically for the beauty and aesthetics industry.

ThermaVein generated sales of £1.8m last year but during the period, the group agreed distribution deals across the UK, Ireland, Holland, Lebanon, UAE, Australia, Israel, Kuwait and Saudi Arabia.

It is now looking to secure deals in Russia, Germany, Turkey and Malaysia. Landmark has also recruited staff in America to sell the product directly into the aesthetic market, where it expects sales to reach £12m a year.

Bolton-based **Landmark Investments Group** bought the worldwide license for the ThermaVein technology in 2012. It was the first investment outside the property sector for Landmark, which has group revenues of more than £85m. **MD Mark Hawthorn** said he expects ThermaVein to be generating annual profits of £2m a year on the back of this expansion within 18 months.

He added: "We have seen rapid expansion of the ThermaVein and have reached our three-year plan for the business in 12 months. The technology is exceeding our expectations. Within 25 days of launching it in the UK we were already speaking to people who wanted us to bring it to the US market, which is going to be areas of business for us. In the industry, businesses globally look to the US to see what is happening there in the skin treatment market, so it was important for to have a footing there quite soon."

ThermaVein is also manufactured in the UK and there is a demand for British-made products. In Russia they wanted us to prove that it was indeed made here and not China."

Contact: www.thermavein.com

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Francis Lamont Innovations wins won Best Start Up at Medilink

The firm is a spinout from a well established design, development and manufacturing business with a versatile team and many years of experience in solving problems and unmet needs by designing pragmatic and innovative solutions.

Francis Lamont Innovations' first project is a device to assist surgeons in a particular approach to total hip replacement, known variously as 'Direct Anterior Approach'. Their solution to the problem that the extra difficulty of carrying out DAA Hip Replacement is a major barrier to its adoption, in spite of the many benefits to the patients and the cost savings, is called the 'Francis Lamont Orthopaedic Table Extension' or 'FLOTE'.

Co founder **Jamie Wootton** is head of orthopaedics at the third biggest hospital trust in the UK, and a pioneer in rapid recovery protocols in hip and knee arthroplasty. He has utilized the Direct Anterior Approach in 400 cases, and has demo'd it to surgeons in the UK, France, Switzerland and Australia.

It has carried out many cases of DAA hip replacement using FLOTE with great success and with a big impact of hospital length of stay, typically 2-2.5 days, compared with a UK national average of 7-8 days. In fact 30% of otherwise healthy patients go home 'next day'. The potential cost saving to a major hospital or health system from the reduced LOS alone is potentially hundreds of millions of pound each year.

DAA Hip Replacement is believed to offer significant benefits to patients, surgeons and the hospital system but there are some barriers to adoption to be overcome before it can become more widely adopted across the UK.

Contact: www.fliuk.com

Kymab starts think tank to accelerate research into translational medicines

The firm, a Cambridge antibody technology powerhouse, has started the **Kymab Access** academic collaboration programme, which is designed to speed the discovery and development of human monoclonal antibodies.

Leading academic centres of excellence in translational medicine worldwide will have the opportunity to evaluate new antibodies discovered on Kymab's next generation platform.

Kymab is able to provide next generation human monoclonal antibodies to support these partnerships, in the quest to develop and commercialise innovative medicines. CEO **Andy Sandham** said that based on the new academic group's understanding of disease biology, Kymab will use its 'Kymouse' technology to discover lead antibodies for evaluation by academic partners.

The Kymouse platform comprises a series of transgenic human antibody mouse strains designed to generate high quality, fully human, therapeutic antibodies with minimal requirement for subsequent engineering.

Kymab Access will operate as an independent affiliate of the Cambridge company to ensure confidentiality of applications from academic groups. A committee of leading academic researchers has been established to oversee the review of applications.

Earlier, **Sir Mark Walport**, director of the **Wellcome Trust**, said: "Our investment in Kymab has allowed technology initiated at the Institute to deliver a world-leading human antibody discovery platform."

Contact: www.kymabaccess.org

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Oxford Immunotec Global plc goes public in December 2013 at \$12 a share

Oxford Immunotec Global is a commercial-stage diagnostics company that provides advanced, innovative tests in the field of immunology. Its proprietary T-SPOT technology platform allows it to measure the responses of specific immune cells, known as T-cells, for the diagnosis, prognosis and monitoring of patients with immunologically controlled diseases.

T-cells are a central component of the human body's immune system, and are implicated in the control and progression of many medical conditions, including certain types of infectious diseases, cancers and autoimmune diseases.

The company estimates net proceeds from the offering to be approximately \$62.8 million, said CEO **Dr Peter Wrighton-Smith**, after deducting commission expenses. The ordinary shares are listed on the **Nasdaq** global market under the trading symbol 'OXFD'. Oxford Immunotec Global is headquartered near

Oxford, and has a facility in Maryland in the US.

Contact: www.oxfordimmunotec.com

Glasgow-based MGB Biopharma completes a £600,000 investment round.

The financing was led by Archangel Informal Investment Ltd in association with TriCap Ltd, Barwell plc and the Scottish Co-investment Fund. To date, MGB Biopharma has successfully raised £2.8 million.

MGB Biopharma, a biotechnology firm working on a new class of antibacterials, will use the funds to scale up manufacturing processes and to carry out preclinical proof of concept for its injectable formulation of the lead antibiotic compound MGB-BP-3. The injectable formulation is intended to treat the major drugresistant infections caused by MRSA, Vancomycin Resistant Enteroccoci and Streptococci.

The current last line of treatment used in serious bacterial infections is gradually being overcome by such resistant strains, rendering these drugs less effective and causing great concern. MGB Biopharma has already successfully completed all preclinical testing for the MGB-BP-3 oral formulation aimed at the treatment of Clostridium difficile infections, and the UK regulatory authorities (MHRA) accepted in early July that this work was sufficient to allow the start of human clinical trials.

Gavin Clark, of MGB, a former student of the **University of Strathclyde** inventor **Professor Colin Suckling**) noted: "The UK Chief Medical Officer's Report earlier this year states that whilst a new infectious disease has been discovered nearly every year over the past 30 years, there have been very few new antibiotics developed. As large pharmaceutical companies focus on areas like cancer antibodies and similar longer term treatments, there has been an increasing lack of novel treatments – adding to the threat of the so-called 'antibiotic apocalypse' as diseases evolve and become resistant to existing drugs."

There are already few large pharma companies engaged in new antibiotic development, and as a result innovation has to come ultimately from smaller companies such as MGB Biopharma and their academic partners, the University of Strathclyde.

Contact: www.mgb-biopharma.com

Section Links

SME NEWS - IT, SOFTWARE, SERVICES & INTERNET

Maritime Assurance and Consulting ranked highly in 2013 Statups 100 list

Founded in 2011, Maritime Assurance and Consulting (MAC) has experienced impressive growth. For the most recent financial year, which ended in June, the firm recorded a 27% rise in revenue – up £600,000 to £2.9m. The company provides consultancy and support services to the worldwide marine, construction, drilling and floating production industries.

The firm is one of five Scottish organisations to earn a place in the **2013 Startups 100 list**, which has previously featured emerging brands including **Notonthehighstreet.com** – which in 2012 had grown to be valued at £100 million – **Naked Wines** and **Wonga**.

Launched in 2008, Startups 100 evaluates privately owned companies on a variety of factors including innovation, financial performance and growth potential. This year's index was open to companies with up to 30 employees which were launched from 2010 onwards.

MAC ranked fourth in the 2013 standings, which are led by **My Parcel Delivery** and have technology firm **Raspberry Pi** in second place. **Senscraft**, a firm focusing on mobile platforms, sits in third place with **Hello Fresh**, specialising in providing dinner kits with fresh ingredients, completing a diverse top five.

The 2013 Startups 100 index has 51 service businesses, 24 from the technology sector, 20 in the product sphere and five social businesses. Of the 100 companies featured this year, 37 were founded outside of London – with Manchester and Bristol among the hotspots.

Contact: www.startups.co.uk/startups-100/2013

SecretSales.com is fast becoming the UK's leading 'flash sales' company

In March 2012 SecretSales, a fast-growing private shopping club, won £6.3m investment institutional investors, and today it is hosting online sales for over 650 designer and lifestyle brands.

CEO Nishil Kukadia said SecretSales was launched in the UK in 2007 to help brands clear excess inventory through short online sales campaigns, which are promoted daily to a private members audience.

SecretSales is the channel partner in the UK for over 650 individual brands across fashion, accessories, home wares, travel and other lifestyle categories. The company boasts almost 2 million 'engaged members' in the UK and over 50 staff located in Notting Hill, London.

The investment round was led by **Doughty Hanson Technology Ventures**, **Pentech Ventures** and **OCP Innovation**, a fund managed by **Partech**, and included **Connect Ventures**, **Leoni Sceti Group** and the management team.

Nish Kukadia, CEO, and **Sach Kukadia**, buying director, are joined by fellow shareholder **Sergio Dias**, formerly CEO of **brands4friends.de**, as chairman.

Ivan Farneti, partner at Doughty Hanson Technology Ventures said "We believe the team at SecretSales has done a great job so far with limited resources. We have now provided a solid financial platform to allow SecretSales to dominate this fast-growing market."

Contact: www.secretsales.com

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£11m financing deal aims to accelerate keyboard app leader SwiftKey

The firm's eponymous keyboard app has been the best-selling paid app on **Google Play** in the last year and a No 1 hit in 58 countries. Owner **Jon Reynolds** said the firm is growing its turnover five-fold annually.

In 2013 the potential of SwiftKey was underlined when the five-year-old company announced a series B investment round worth \$17.5m (£11.3m), led by **Index Ventures**.

SwiftKey is the tech behind that uber-nifty smartphone app that lets you slide your finger across your phone's screen keypad to type, and also predicts words more effectively than anything else we've come across.

The business has tripled in size to 100 staff over the year, as well as opening offices in **Seoul** and **San Francisco**, to expand from its **London HQ**. CEO and co-founder Jon Reynolds believes the firm creates 'world-class language technology'. He said "We've always seen it as being about language rather than typing. We set out to transform the way you communicate using smartphones and tablets, and developed an approach to problem solving that we believe can be applied to many other applications.

"It makes typing faster and easier by predicting your next word and offers relevant auto-correction, so you can say goodbye to those 'damn you autocorrect' moments."

Contact: www.swiftkey.net

GENERAL NEWS

Twenty-five members of the 'Future Fifty' unveiled by the Prime Minister

The list is, somewhat tediously dominated by internet ventures, however, and is part of efforts to help Britain, and especially London, compete in the global battle for digital talent. The companies applied for the programme after it was announced by the Chancellor in April. It will receive advice from civil servants on how to navigate red tape and mentoring from venture capitalists on how to attract private investment.

The 'Top Three' includes **Skyscanner**, the Edinburgh-based travel comparison search engine, recently attracted £62m from Silicon Valley VC firm **Sequoia Capital** that valued the company at \$800m, and its Welsh-born founder **Mike Moritz** will join its board. Revenues have doubled in each of the last four years and last years stood at £33.5m on the back of £2.3bn in flight sales. Skyscanner now has nearly 200 staff and offices in the US, China and Singapore.

Hailo's mobile app has revolutionised getting a cab in London since it was introduced only two years ago. Hailo uses the mapping and GPS functions of smartphones to match nearby taxis with passengers on the streets of the capital. With a few taps of their screen, customers can summon and pay for a cab, meaning drivers do less aimless searching for fares and make fewer cash machine stops. The company claims 'annualised sales' of more than \$100m and has expanded to offer its service to taxi drivers and passengers in Dublin and Toronto, and is taking on American rivals **Uber** and **Lyft** on their home turf in Boston and Chicago.

Omnifone was among the first technology companies to spot that the future of music and the future of mobile phones were linked. Begun in 2003 by an entrepreneurial trio including **Rob Lewis**, a pioneer of British online publishing, it streams music from a vast, fully-licensed catalogue to handsets in 34 countries. The experience is similar to **Spotify**, except Omnifone offers its digital jukebox on a white label basis to mobile networks and handset manufacturers who do not want to be cut out of the revenue opportunities of internet services that exploit their hardware and networks. In 2012 Omnifone's turnover more than doubled to £29.5m and following heavy technological investment it swung from a £22m loss in 2011 to a £3m profit.

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Other notable firms include **Zoopla Property Group** – owns and operates leading online property brands including Zoopla.co.uk and Primelocation.com. Its websites attract over 40 million visits each month.

Neomobile is a mobile commerce group providing mobile payment and advertising services; **HouseTrip** – one of the largest holiday rental websites in the world, offering holidaymakers and holiday home owners a safe and easy-to-use platform to find, book and list holiday apartments, houses and villas.

Green Man Gaming – the fastest growing social commerce platform for core gamers which combines an automated game tracking community with a robust digital E-commerce platform.

Acturis – an innovative, cloud based Software as a Service platform transforming the commercial insurance industry; **Lumimobile** – employs world class patented technology to empower business insight and engagement through mobile devices.

Repknight has pioneered the fastest open source intelligence (OSINT) platform in the world, sold only to government security services and police forces. **Skimlinks** creates native monetisation solutions for publishers, rewarding them for any e-commerce they drive by turning product links and product references into easily tracked affiliate links.

Lastly, **Synthesio** is a leader in global social media monitoring, helping brands and agencies listen to, understand and engage with consumers.

Dell launches Centre for Entrepreneurs (CfE) scheme in the UK

The US PC manufacturing giant also brought with it a £10m growth fund for startups and office space for a year at Dell's UK headquarters. The company, which calls itself the 'world's largest startup', will give the firms £10m worth of its services, with the firm intending to become the end-to-end providers of technology to the UK's tech startups.

Sarah Shields, Dell UK's director for SMEs, said the fund was intended to give companies the opportunity for fast growth. She said "We're looking for startups and entrepreneurs with a good, solid business plan who have technology as the backbone of their organization. We want to get in, see how we can assist by giving them the right technology and financing them in the right way."

She added that Dell is not looking for businesses in any particular area of the tech industry, and that the money made available could be spent in any area of their business. "Access to finance is key," she said. "You need to have the ability to get the technology you want."

The company has also launched the **Dell CfE Advisory Council**, which will be comprised of Dell executives and UK entrepreneurs. The council will meet quarterly, looking to tackle issues faced by the UK's smaller businesses. Finally, Dell also announced its **Founders Club** for networking opportunities among businesses worldwide. Applications for the £10m credit fund are now open, while the startup in residence competition launches on 2 December.

Contact: www.dell.co.uk - Sarah Shields - s shields@dell.com

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FUNDING & INVESTMENTS

Gibson Index favourite IFE Services snapped up by Los Angeles rival

Knutsford-based IFE Services provides movies, TV programmes, mobile apps, games, safety videos, publications, and technical support to more than 50 airline and cruise ship operators.

IFE Services has been consistently rated '10', the top level rating for the very best companies in the **Gibson Index**. Currently, there are less than 3,000 top-rated SMEs among the 49,000 firms in the dataset.

In November the Cheshire firm was bought for £22m in cash by Los Angeles-based **Global Eagle Entertainment** from GCP Capital Partners. **Adam Maidment**, MD of GCP Capital Partners, said: "Having supported the business and the management team of IFE over the last five years, we are delighted that, in Global Eagle, IFE Services has a supportive new owner that will be able to capitalise on its achievements to date. We would like to thank the CEO **Andy McEwan** and his team for their excellent work over the last few years and we wish them well in this next phase of the business' development."

IFE Services is expected to generate revenues of between \$37m and \$40m and approximately \$7m to \$9m of adjusted EBITDA in 2013. **Dave Davis**, chief financial officer of Global Eagle, said: "This is another transaction that we expect to be highly complementary to our existing business. In addition to adding IFE Service's strong cash flows, we believe we can unlock substantial efficiencies from our combined operations to the benefit of our shareholders."

Contact: www.ifeservices.com

Events lined up for SMEs keen to source grants under Horizon 2020 scheme

Pera Technology, in collaboration with **EEF**, is offering the opportunity for UK SMEs to attend a breakfast event focused on the new funding programme from the **European Union – Horizon 2020**.

Approximately 4.8 million businesses across the UK will be applicable for the fund. However, there are over 1 million SME manufacturers who are likely to be the most successful at securing funding. Offering an enormous opportunity for SME manufacturers, the final figure for Horizon 2020's 'Dedicated SME Instrument' is likely to exceed the previous programme's budget of £1.2 billion.

For SME manufacturers the time to act is now. Whether you have ideas sitting on the shelf gathering dust, or if they are already undergoing feasibility testing – the chance to secure up to 100 per cent funding for research and development cannot be missed.

Horizon 2020 is part of the EU's wide ranging package of support services to encourage research and innovation and will launch in January 2014. Previous versions of the fund have seen 1,659 UK businesses successfully applying for the £1.2 billion made available in 2012, second only to Spain in terms of securing much-needed finance.

Next year the sum available to small firms will double to £2.5 billion, which reflects the importance these businesses have in terms of the economy around the world. The new fund is the latest format of the longstanding **Framework Programme**, which is set to run until the end of 2013.

Contact: www.peratechnology.com/grant-funding/horizon-2020

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Start Up Loans scheme hands out its 10,000th award of funding

Royal Navy veteran **Allen Martin** received £10,000 to help launch his new business, Truro-based property management company **Eclipse Property Cornwall**.

Another example is **Paul Beadle**, 46, decided to start his own company **Fire Stopper** Ltd, specialising in installation and maintenance of fire extinguishers and CCTV systems, through the help of an £8,000 Start Up Loan and delivery partner **Business Finance Solutions**.

Start Up Loans has now provided a total of £50m to 11,181 entrepreneurial businesses seeking support for new business ideas – out of a total of £82.5m allocated to the scheme in September 2012.

At the launch enterprise adviser **Lord Young** said: "If we were as entrepreneurial as the US we'd have 900,000 more firms. There would be no unemployment. We would have an entirely different business environment. I can honestly say that I have never, ever, known a better time to start a business. We're going to get those extra 900,000 companies – and you're going to do it.."

Contact: www.startuploans.co.uk

More than 1,100 SMEs benefit from Seed Enterprise Investment Scheme

HMRC reports that by November 2013 the Seed Enterprise Investment Scheme (SEIS), designed to help small, early stage companies raise equity finance, had helped over 1,100 companies to raise the money they need to grow or expand.

Launched in 2012, SEIS offers tax reliefs to individual investors buying shares in small companies at a very early start up stage. Companies have raised over £82 million of funding through the scheme.

The Treasury also produced an infographic explains the scheme and breaks down some of the key figures. On average, £1.3 million of SEIS funding is raised by 19 companies every week through the scheme. The average amount of investment raised by a company is £72,000.

SEIS allows companies to raise up to £150,000 of equity finance – funding in return for an agreed share in the company – through the scheme in their lifetime. This can provide vital early stage funding and offers an additional or alternative to bank lending, as well as potential access to angel investors that can provide invaluable business experience.

Contact: www.seis.co.uk - www.hmrc.gov.uk/seedeis

UNIVERSITY NEWS

University of Leicester develops fully biodegradable and recyclable fibreboard

Almost one million tonnes of medium density fibreboard (MDF) is produced in the UK every year. It is a cheap and popular engineered wood product widely used for furniture and other products in homes, offices and retail businesses. However, as MDF cannot be recycled, waste MDF either has to be incinerated or ends up in landfill.

Professor Andrew Abbott and his team at the **Department of Chemistry** at the University of Leicester have developed a new wood-based product similar to MDF that uses a resin based on starch from completely natural sources, including potatoes.

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A significant proportion of MDF is used for short term applications in the retail sector. The use of a material which can either be recycled or composted would be a significant benefit to an industry often criticised for the amount of waste it generates.

With the aid of colleagues at the **Biocomposites Centre**, **Bangor University** and the Leicestershire-based retail design company **Sheridan and Co**., his team have produced starch-based boards which have been made into retail display units.

The practical studies were led by **Dr Will Wise** who said: "It has been a technological challenge to develop material with the correct properties, but it is a great thrill to see the finished boards which look identical to the MDF which is so commonly used."

The new material is easier to manufacture than existing MDF as the components are easily pre-mixed and only set on the application of heat and pressure; end user feedback suggests it is also easier to work with than currently available MDF boards.

Professor Abbott and his group at University of Leicester are also developing new fillers for plastics based on orange and banana peel and eggshell. These waste materials can lead to improved strength, hardness and cost benefits.

Professor Andrew Abbott has been awarded the **Royal Society Brian Mercer Award for Innovation 2013** that will help him make the critical step from prototype to product. He will receive £172,347, which will be used to bring the four collaborators together to create a supply chain to create prototypes for the point-of-sale market.

The Brian Mercer Award for Innovation is a scheme for scientists who wish to develop an already proven concept or prototype into a near-market product ready for commercial exploitation.

Contact: www.le.ac.uk/departments/chemistry

University of Huddersfield to develop rail track embedded with fibre optics

Its **Institute of Railway Research** is working on the development of modular, all-steel track sections that can be laid quickly and embedded with fibre optic technology, which provides instant safety alerts. This could lead to massive cost savings and gains in efficiency.

The Institute of Railway Research (IRR), headed by **Professor Simon Iwnicki**, is based at the University and is one of the partners in a Euro15m, four-year project funded by the European Union under its 7th Framework Programme.

Named **Capacity4Rail**, the ambitious scheme aims to ensure that railways will continue to meet Europe's transport needs over the decades to come. Low maintenance infrastructure, more resilient and easily repairable points – or switches – and higher-speed freight vehicles are among the goals. There are 47 partners – including major technology companies and European universities – and the University of Huddersfield's IRR concentrates on a work package entitled "modular integrated design of new concepts for infrastructure".

The construction of modular track sections in the factory would mean that they could be pre-equipped with smart technology. This condition monitoring system would make maintenance a much simpler process, adding to the efficiency gains from modular track construction.

Contact: www.hud.ac.uk/research/researchcentres/irr

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Bullivant Taranto Ltd and Queen's University Belfast win KTP accolade for 2013

The Northern Ireland concrete company was named as the UK's Best Knowledge Transfer Partnership (KTP) at the national **KTP Awards** in London.

Queen's and **Bullivant Taranto Ltd** won £10,000 for their partnership which was formed to drive innovation in the construction products industry. Their collaboration aims to reduce energy costs and the environmental impact in the manufacture of pre-cast concrete.

KTPs enable companies to work with university staff to transfer knowledge, skills and expertise into their organisation. Queen's is currently the UK's leading university for KTPs, with 31 partnerships ongoing across the University, more than any other UK institution. Queen's KTP programmes are part-funded by the Technology Strategy Board and Invest Northern Ireland.

Simon Bullivant, MD of **Bullivant Taranto**, said: "Our project won the Best Partnership category and the partnership we've embarked on with Queen's University Belfast and Richard Morton brought innovations to our sector." Also successful at the awards ceremony was Northern Ireland company, **Seven Technologies** which won the 2013 award for Business Impact as a result of their KTP with Queen's University.

Contact: www.bullivanttaranto.com

University of Birmingham finds possible replacement for platinum in fuel cells

The Birmingham chemists have combined gelatin – the same gelatin that is used to make jelly – with iron and magnesium to create a material that performs almost as well as a commercial platinum catalyst, but is considerably cheaper.

Dr Zoe Schnepp, Birmingham Fellow from the University of Birmingham's **School of Chemistry**, who led the research, said: 'One of the biggest challenges for materials science is to design sustainable materials. This includes materials made from cheap and abundant resources and also simple and safe manufacturing methods.

'Unlike platinum, which is rare, our new material is made up of the abundant and cheap elements, iron and magnesium. By combining these with gelatin we have made an effective material which shows remarkable performance in generating electricity comparable to a commercial platinum catalyst. The key is that the gelatin material is not only cheap, but it's extremely easy to make.'

Their new material performs so well because the iron and magnesium salts cause the gelatin to foam, creating a sponge-like structure. When this is heated, nanoparticles of a compound called iron carbide form inside the sponge.

These nanoparticles can be easily dissolved, leaving tiny holes rather like hollow capsules, in the walls of the sponge. Together, the capsules and the sponge-structure create an extremely high surface area, which is crucial for allowing the gaseous reactants to flow through the fuel cell catalyst.

Fuel cells are used to generate electricity and they do this by combining hydrogen and oxygen. The automotive industry is interested in using fuel cells as a means of powering cars with hydrogen instead of using diminishing fossil fuels. One of the major hurdles to this is that the catalysts used in the fuel cells are made of extremely expensive materials including platinum.

Contact: Dr Zoe Schnepp – School of Chemistry – z.schnepp@bham.ac.uk

Section Links

Heriot-Watt academic - first Chair of High Speed Rail Engineering for the UK

Civil contractor **Atkins** has appointed **Professor Peter Woodward** from the School of the Built Environment at Heriot-Watt University, as its first Chair of High Speed Rail Engineering. Professor Woodward will provide technical advice and work together with Atkins' team to overcome some of the challenges of high speed rail.

Professor Peter Woodward, who is head of the **Institute for Infrastructure and Environment**, said: "High and ultra-speed railways are our future, they have the capacity to transform the economic prosperity of nations and our challenge is to develop the technology to underpin their successful implementation and cost effectiveness across the world.

"Heriot-Watt already has the UK's biggest purpose-built laboratory test track bed (GRAFT II) which can predict the effects of high speed trains and simulate the effects of decades of operation on major lines. With the support of Atkins we plan to construct the world's most advanced railway test track facility (GRAFT III) and to develop the world's premier railway testing organisation for high-speed." The next stage is to look at constructing the world's most advanced railway test track facility to push the boundaries of railway track research beyond high speed into the realm of ultra high speed – trains that run at 400km/h.

Douglas McCormick, MD of **Atkins' Rail** business, said the requirement for high speed rail is growing at a pace – with projects worldwide expected to be worth hundreds of billions of pounds in just the next 15 years.

Contact: www.atkinsglobal.com/sectors-and-services/sectors/rail

Leeds and P&G sign agreement to harness research for new high-tech products

With more than 20 joint research projects already under way **P&G** and the University of Leeds have a longstanding partnership – and this new 'Declaration of Strategic Relationship' will more thoroughly integrate the two organisations' planning and operations.

Within P&G a dedicated 'Connect+Develop' board will identify the potential academic partners for key projects, while university researchers also are encouraged to approach P&G with ideas.

An innovative **P&G Simulation Centre**, based on the University's campus, will recruit final-year PhD students from a variety of disciplines to work on 20-hours-a-week, six-month contracts on projects for business units across the company. Students are recruited because they have relevant expertise to a project and are often not working with P&G in their full-time research.

For example, the development of a 'new experimental apparatus for powder measurement' is aiding P&G's home care business – dishwasher tablets – to assess the caking propensity of powders more rapidly. Other projects are having an impact on the wider household products industry. For example, work done at **Institute of Particle Science & Engineering** (IPSE) at Leeds relating to enzyme dust formation has led to new recommendations for hygiene and worker safety, something the world's largest detergent enzyme suppliers and users are currently considering for adoption.

Contact: www.engineering.leeds.ac.uk/ipse

Section Links

Apple.com chooses UK app as the top iPad app out of 475,000 competitors

It must be the techy student dream - create a mobile application and then be singled out.

This is the experience of **Vagelis Katsantonis** and **Elpida Voulgari**, who have an MSc in Virtual Environments from **UCL** and a Masters in Computer Studies at the **University of Essex**, respectively.

Currently their app **Avokiddo Emotions** is 'No.1 in Apple's list of favourite iPad apps' says the Apple website. It supports playful learning for kids. "A zany zebra, shy sheep, and jolly giraffe help kids discover emotions. Using over 100 props, kids can make animals laugh, cry, or feel any way they want."

The app was featured on the main banner in the Education section of the App Store, designated as New and Noteworthy, and was handpicked by Apple's editors for the feature category 'Best for ages 5 and Under.' It has also attracted praise from *USA Today* and *The Guardian*. "Undoubtedly, our recent success with Avokiddo Emotions has its seeds in our 'Enlightenment' years at UCL," said Vagelis Katsantonis.

Contact: www.avokiddo.com

AND FINALLY...

>> Forget snooping by **GCHQ** and America's **NSA** – thousands of people who sell goods online are to be monitored by web robots as part of **HMRC's** e-marketplace campaign.

As part of its series of campaigns to improve levels of tax compliance, HMRC will now focus on online traders who use sites such as **eBay, Gumtree** and **Autotrader**.

Individuals who are already compliant with their tax returns and declare income from such activities are not at risk. However, anyone conducting high value trades or selling repeatedly without declaring to the taxman will be under the spotlight.

Derek Allen, tax director at **ICAS**, the professional body of chartered accountants, said: "HMRC's web robots will map information that indicates online trades. Big Brother is watching. It will be less painful for anyone in doubt to come forward rather than waiting for HMRC to catch up with them. The tax risk areas include income tax, capital gains tax and if VAT was not accounted for in sales."

The number of people who have side-line businesses through online trading has risen as sites such as eBay and gumtree have grown in popularity. eBay recently reported that 'over 1 million people in the UK use online sales on the site as their first or secondary source of income'. A conservative estimate of unpaid tax from web-derived sources is around £15bn a year, with much larger sums involved if VAT is included.

>> In October 2013 the **Manufacturing Advisory Service's** 'Barometer' survey of England's manufacturing SMEs, has opened and is seeking responses. The barometer is a national survey of manufacturing SME businesses based in England, which captures what conditions are like within the manufacturing community. One of the biggest of its kind, the findings are analysed by independent economic and research specialists, published and fed back to government.

Manufacturers across the South West have recently reported a surge in activity, with this survey providing a further opportunity to ascertain what conditions within the sector are like. If you are a decision maker at an SME manufacturing business, get in touch via barometer@mymas.org – to be invited to take part.

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