

'Super solvents' voted 'Most Important British Innovation of the 21st Century'

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Ken Seddon and Jim Swindall.

Research by scientists from Queen's University Belfast on ionic liquid chemistry has been named the 'Most Important British Innovation of the 21st Century'.

The work of staff in the Queen's University Ionic Liquid Laboratories

(QUILL) Research Centre has been named as the innovation that will have the greatest impact in the coming Century.

QUILL fought off stiff competition from 11 other [innovations](#) from across the United Kingdom to win the vote which was part of the [Science Museum](#)'s Initiative on Great British past and future Innovations. This initiative was also sponsored, amongst others, by: Engineering UK, The Royal Society, British Science Association, Royal Academy of Engineering and Department for Business Innovation & Skills.

A team of nearly 100 scientists are exploring the potential of [ionic liquids](#) at Queen's. Known as 'super solvents', they are salts that remain liquid at room temperature and do not form vapours. They can be used as non-polluting alternatives to conventional solvents and are revolutionising chemical processes by offering a much more environmentally friendly solution than traditional methods.

Professor Ken Seddon is Co-Director of QUILL. His seminal paper started the world-wide surge of interest in ionic liquids and it has now reached over 1000 citations. Speaking about their latest achievement, he said: "We are delighted to win as this shines a very public spotlight on how a team of chemists can dramatically improve the quality of the environment for everyone. Being named the most important British innovation of the [21st Century](#) is recognition of the high calibre of research being undertaken at QUILL and throughout the University."

Professor Jim Swindall, Co-Director of QUILL at Queen's, said: "This is fantastic news for QUILL and for the University. This vote confirms that Queen's work on ionic liquid [chemistry](#) will eventually have a bearing on most of our lives. The liquids dissolve almost everything, from elements such as sulfur and phosphorus (that traditionally require nasty solvents) to polymers, including biomass. They can even remove

bacterial biofilms such as MRSA. They are already being used in a process to remove mercury from natural gas by Petronas in Malaysia. Others can be used as heat pumps, compression fluids, or lubricants - the list is limitless."

Enterprise Minister Arlene Foster said: "I congratulate Queen's University on winning this most prestigious of accolades. It is a great achievement for Professors Ken Sedden and Jim Swindall and the entire team at QUILL and it is a great day for Northern Ireland science. This recognition underlines the strength of research being undertaken by Queen's and the impact this research has on the chemical and environmental industry around the world."

Robin Swann, Chairman of the Northern Ireland Assembly's Committee for Employment and Learning said: "The result of this public vote is terrific news for Northern Ireland as it demonstrates the importance of the research being undertaken at Queen's. The fact that global energy giant Petronas is already using the technology in its plants demonstrates the value and global impact of the research at the University and I congratulate Queen's on this significant achievement."

Provided by Queen's University Belfast

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