

The University of Salford has taken the honours in this category for its development of an eco-friendly aerosol valve system that has the potential to significantly reduce global greenhouse emissions.

The system, developed by a team led by Ghasem Nasr, director of Salford's Spray Research Group, Obviates the need for volatile organic compounds (VOCs) in aerosol sprays – a major breakthrough in the battle to enhance aerosol safety and reduce the production of harmful gases.

The valves use inert compressed gas as propellant, rather than the liquefied petroleum gam currently used in many aerosols.

The team has worked with the Salford Valve Company, a private venture that focuses on commercialising the university's intellectual property, to introduce the technology to the multimillion-pound global aerosol spray market. It has already secured five patents.

Chris Cobb, chief operating officer and secretary at the University of London and one of our judges, said "In an excellent field, we eventually decided to make the award to Professor Nasr's team.

"It is estimated that around 17 billion aerosol units are produced each year, and the VOCs used to contribute significantly to global warming. As well as reducing the emission of greenhouse gases, the valve will also reduce production costs and enhance safety applications and industrial promise make it a worthy winner."