

IChemE Medals and Prize Winners 2025

Medal	Winner	Supporting Information
<p>Andrew Medal</p> <p>The Andrew Medal recognises a major contribution relevant to the science of formulation of heterogeneous catalysts.</p>	<p>Andrew M. Beale</p>	<p>Andrew Beale is awarded the Andrew Medal for his significant contributions to the understanding, design, and formulation of new catalysts. His research elevates the understanding of catalysis and fosters the creation of spin-out companies, demonstrating a substantial impact across various catalytic processes.</p>
<p>Ambassador Prize</p> <p>The Ambassador Prize is awarded to a volunteer who has made exceptional contributions, likely within an IChemE Special Interest Group, Member Group or as an ambassador for the Institution and/or profession more widely. This prize is typically awarded in recognition of a sustained period of work on a short to medium term project.</p>	<p>Mary Stewart</p>	<p>The Ambassador Prize is awarded to Mary Stewart for her pivotal role in shaping IChemE's response to climate change. Her leadership within the Energy Community of Practice and collaboration with the UNFCCC were key to developing IChemE's important statement on climate change and its implications for a just transition.</p>
<p>Clean Energy Medal</p> <p>The Clean Energy Medal is awarded to an individual in recognition of outstanding service in the field of Clean Energy, including but not limited to mitigation of climate change, reduction of pollutant emission and reducing utilisation of non-renewable feedstocks.</p>	<p>Christos Markides</p>	<p>Christos Markides is awarded the Clean Energy Medal for his research leadership in the clean energy field and contributions in the areas of solar and waste heat innovations, working across academia and industry.</p>
<p>Davidson Medal</p> <p>The Davidson Medal recognises individuals who have been active mentors in industry or academia.</p>	<p>Rainer Freudenberger</p>	<p>Rainer Freudenberger is awarded the Davidson Medal in recognition of his service and commitment to mentoring in chemical engineering. His mentorship has profoundly influenced individuals and organisations spanning industry, education, and research. This award acknowledges the depth of his engagement and the lasting impact he has made throughout his career.</p>

Medal	Winner	Supporting Information
<p data-bbox="296 259 504 293">Donald Medal</p> <p data-bbox="193 320 595 412">The Donald Medal is awarded to an individual for outstanding services in biochemical engineering.</p>	<p data-bbox="719 259 954 293">Daniel Bracewell</p>	<p data-bbox="1066 259 1437 674">Daniel Bracewell is awarded the Donald Medal for his outstanding contributions and dedication to the field of bioprocessing. His pioneering research in downstream bioprocessing, bioseparations, and cell-free synthesis processes has greatly advanced the understanding of biological product recovery and has fostered industry-relevant solutions and commercial spinout initiatives.</p>
<p data-bbox="288 716 512 750">Franklin Medal</p> <p data-bbox="193 777 592 958">The Franklin Medal is awarded to an individual in recognition of outstanding service in the fields of occupational health, safety, loss prevention and care for the environment.</p>	<p data-bbox="746 716 927 750">David Green</p>	<p data-bbox="1066 716 1437 936">David Green is awarded the Franklin Medal for his remarkable contributions to the field of chemical engineering and his unwavering commitment to environmental care over the years.</p>
<p data-bbox="296 999 504 1032">Greene Medal</p> <p data-bbox="193 1059 587 1211">The Greene Medal is awarded to an individual who has made the most commendable long-term contribution to the progress of IChemE.</p>	<p data-bbox="770 999 903 1032">Ian Shott</p>	<p data-bbox="1066 999 1437 1447">Ian Shott CBE is honoured with the Greene Medal for his outstanding contributions to IChemE over the past 20 years. As Technical Vice President and President, he led key initiatives, including the first technical roadmap and the Biofutures Report, while strengthening IChemE's global presence. His generous donations also enabled the establishment of the Sustainability Hub and a major overhaul of the Benevolent Fund.</p>
<p data-bbox="256 1485 544 1518">Guggenheim Medal</p> <p data-bbox="193 1545 587 1697">The Guggenheim Medal is awarded to an individual who has made a significant recent contribution to research in thermodynamics and/or complex fluids.</p>	<p data-bbox="738 1485 935 1518">Clare McCabe</p>	<p data-bbox="1066 1485 1437 1805">Clare McCabe is awarded the Guggenheim Medal in recognition of her seminal research contributions to computational models and methods in fluid-phase thermodynamics. Her work has deepened the understanding of self-assembly in complex fluids and addressed significant societal challenges.</p>

Medal	Winner	Supporting Information
<p>Hanson Medal</p> <p>The Hanson Medal is awarded to the author or authors of the best article to appear in The Chemical Engineer magazine each year.</p>	<p>Duncan Barker</p>	<p>'Imagining What Chemical Engineering Will Look Like In 50 Years' (<i>The Chemical Engineer</i>, issue 990/991) is a uniquely interesting and engaging story of the author's family which also directs our thoughts to the future and informs our current efforts in the chemical engineering profession.</p>
<p>Hutchison Medal</p> <p>The Hutchison Medal recognises authors for a contribution to the literature that has stimulated debate within the chemical engineering community.</p>	<p>Ayeon Kim Heehyang Kim Yus Donald Chaniago Hankwon Lim</p>	<p>'Carbon Dioxide Removal from the Oceans: Carbon Dioxide Emission and Techno-Economic Analyses of Producing Renewable Synthetic Methane' (<i>Sustainable Production and Consumption</i>, 41: 21–35) introduces an innovative and thought-provoking approach to extracting CO₂ from the oceans as a strategy to mitigate atmospheric carbon levels. The paper also outlines a process for utilising this CO₂ in the production of renewable methane, exploring various scenarios and their implications for net CO₂ emissions.</p>
<p>Macnab Lacey Prize</p> <p>The Macnab-Lacey Prize is awarded to the undergraduate student design project team whose design project submission best shows how chemical engineering practice can contribute to a more sustainable world.</p>	<p>Imperial College London</p> <p>Serene Boonnasitha Chow Rouxuan Alex Glover Cheryl Lum Sinclair Mabon Rohan Aditya Shenoy Kabishan Jonat Sivarasan Gabriela Andrienne Trisno Shihabuddeen Waqar Qing Lei Wei Lok (Amanda) Wong Zhenran Zhang</p>	<p>The Macnab Lacey Prize is awarded to the team from Imperial College London for their outstanding design in green ammonia production from water and air. This innovative project utilises renewable energy resources, incorporates green engineering principles, and applies relevant sustainability metrics. The team employed software for detailed design and optimisation, taking into account various sustainability criteria and process economics. Judges were particularly impressed by the depth and scope of the study.</p>

Medal	Winner	Supporting Information
<p>Junior Moulton Medal</p> <p>The Junior Moulton Medal is awarded to the early-career author or authors of the most meritorious paper published by IChemE during the last year.</p> <p>Authors who graduated within the 10 years of submission of the paper (excluding career breaks) are eligible for the award.</p>	<p>Lauren M. Lopez Quan Zhang Orion Dollar</p>	<p>'Application of Automated Network Generation for Retrosynthetic Planning of Potential Corrosion Inhibitors' by Lauren M. Lopez, Quan Zhang, Orion Dollar, Jim Pfaendtner, Brent H. Shanks, and Linda J. Broadbelt (<i>Molecular Systems Design and Engineering</i>, 9: 352–371) presents a clever network generation method for identifying chemical pathway synthesis. The research introduces novel concepts such as helper molecules, enabling the generation of three-step pathways that would otherwise be unfeasible. Its application to corrosion inhibitors highlights the practical value of this approach and demonstrates its potential for the retrosynthesis of various products.</p>
<p>Senior Moulton Medal</p> <p>The Senior Moulton Medal is awarded to the author, or authors, of the most meritorious paper published by IChemE during the last year.</p>	<p>Federica Tamburini Sarah Bonvicini Valerio Cozzani</p>	<p>'Consequences of subsea CO₂ blowouts in shallow water' by Federica Tamburini, Sarah Bonvicini, and Valerio Cozzani (<i>Process Safety and Environmental Protection</i>, 183: 203–216) provides a clear, detailed and practical treatment to an important and topical area of safety – carbon dioxide subsea storage. The paper provides a quantitative framework for risk assessment in this area by bringing together several interesting modelling elements establishing a new capability to an important technical area.</p>
<p>Nicklin Medal</p> <p>The Nicklin Medal is an early careers award that recognises talented chemical engineering researchers. Nominees must, at the time of the awards nomination deadline, have no more than ten years postdoctoral research experience (excluding career breaks) and should have produced international quality research outputs.</p>	<p>Helena Wang</p>	<p>Helena Wang receives the Nicklin Medal for her impactful research in energy materials, which shows significant promise in advancing several UN Sustainable Development Goals. Her achievements are underscored by numerous fellowships, a strong publication record, a patent, and demonstrated leadership</p>

Medal	Winner	Supporting Information
<p>Junior Sargent Medal</p> <p>The medal is awarded to a promising early career academic or industrial individual who has already made a significant recent contribution to the research of computer-aided product and process engineering.</p>	<p>Antonio del Rio Chanona</p>	<p>Antonio Del Rio Chanona is awarded the Junior Sargent Medal for his pioneering work integrating machine learning into process systems engineering. His research, applied to innovative bioprocesses and collaborative projects with BASF, focuses on enhancing the resilience and sustainability of global supply chains.</p>
<p>Sargent Medal</p> <p>The medal is awarded to an individual who has made a significant recent contribution to research into computer-aided product and process engineering.</p>	<p>Marianthi Ierapetritou</p>	<p>Marianthi Ierapetritou receives the Sargent Medal for her outstanding contributions to process systems engineering, particularly in flexibility analysis and supply chain optimization. Her research has significantly impacted the pharmaceuticals and biopharmaceuticals industries.</p>
<p>Sharma Medal</p> <p>The medal is presented to an individual who has, across their career, made a significant contribution to the field of chemical engineering research. The judging committee will consider: originality and impact of research, innovation, professional standing, and other indicators of esteem indicated by the nominee/nominator.</p>	<p>Ian Saxley Metcalfe</p>	<p>Ian Saxley Metcalfe FREng receives the Sharma Medal for his prolific and outstanding research directly contributing to the UN Sustainable Development Goal on energy. His work, rooted in materials science and thermodynamics, has led to groundbreaking advances in membrane engineering and catalysis, significantly improving sustainability.</p>
<p>SIESO Medal</p> <p>The SIESO Medal seeks to raise awareness of process safety among science, business and engineering students.</p> <p>The medal is awarded annually to an individual or group of students for the best presentation of a major accident and the learning outcomes.</p>	<p>Princess D. Dube</p>	<p>Princess Diana Dube is awarded the SIESO Medal for her exceptional paper and graphic art detailing the largely unknown LPG tanker explosion in Boksburg, South Africa. Her well-researched and engaging work brought important attention to this significant incident.</p>

Medal	Winner	Supporting Information
<p data-bbox="284 264 512 293">Trustees Medal</p> <p data-bbox="193 322 596 412">The Trustees Medal is awarded to a volunteer who has given exceptional service to an IChemE project.</p>	<p data-bbox="695 264 979 293">Stephen Richardson</p>	<p data-bbox="1066 264 1439 645">Stephen Richardson FREng CBE is awarded the Trustees Medal in for his outstanding work in streamlining processes and enhancing the experience for partner universities in 2023-2024. The award also acknowledges his remarkable and sustained commitment to volunteer service within the Institution and the wider chemical engineering profession over many years.</p>
<p data-bbox="293 685 502 714">Warner Medal</p> <p data-bbox="193 743 596 1025">The Warner Medal is presented to an individual, normally in the early stages of their career, who has shown exceptional promise in the field of sustainable chemical process technology, nuclear technology or in making chemical engineering more accessible to a wider scientific community.</p>	<p data-bbox="732 685 943 714">Greg A. Mutch</p>	<p data-bbox="1066 685 1439 1131">Greg Alexander Mutch is awarded the Warner Medal for his research, which sheds new light on adsorbents and membranes, especially for carbon capture, for extraordinary outreach work and engagement with socio-political implications, including via podcasts, public lectures, magazine articles and contributing to curation and delivery of an art exhibition exploring the social impact of the energy transition.</p>
<p data-bbox="263 1173 533 1202">Underwood Medal</p> <p data-bbox="193 1232 596 1384">The Underwood Medal is awarded to an individual from academia or industry who has made a significant sustained recent contribution to research in the area of separations.</p>	<p data-bbox="713 1173 959 1202">Stefano Brandani</p>	<p data-bbox="1066 1173 1439 1451">The Underwood Medal is awarded to Stefano Brandani for his significant and extensive contribution to research in adsorption materials and processes which is impacting the field of gas separation and carbon capture for decarbonising the economy.</p>