



# IChemE Medals and Prize Winners 2024

Medal	Winner	Winning paper / supporting information
<p><b>Ambassador Prize</b></p> <p>The Ambassador Prize is awarded to a volunteer who has made exceptional contributions, likely within an IChemE Special Interest Group (SIG), 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><b>The late Jennifer Aitken</b></p>	<p>Jennifer Aitken is being awarded the Ambassador Prize in recognition of her outstanding contributions to chemical engineering, particularly in pharmaceutical process design. Her significant roles in the Pharma SIG committee and the Learned Society Finance Review Committee, along with her influential work in process safety, notably in being part of the launching party of the project "Small-scale industrial explosions," highlight her leadership and technical acumen. Her commitment to mentoring and guiding upcoming engineers, coupled with her contributions to several "The Chemical Engineer" magazine articles, showcase her dedication to advancing the field.</p>
<p><b>Greene Medal</b></p> <p>The Greene medal is awarded every year to an individual who has made the most commendable long-term contribution to the progress of IChemE.</p>	<p><b>Geoff Maitland</b></p>	<p>For his sustained and outstanding contribution to the work and public profile of IChemE over several decades. Over the course of 40 years, Geoff has contributed in many ways, including serving on journal editorial boards, judging Awards entries, speaking to the media on behalf of IChemE, chairing its Research Committee, serving as IChemE's president and on its Benevolent Fund, as well as the Succession Planning Committee.</p>
<p><b>Franklin Medal</b></p> <p>The 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><b>Gus Carroll</b></p>	<p>Gus Carroll is the well deserving winner of the Franklin Medal, which recognises his long, diverse and continually evolving career in which he has positively influenced safety performance across a range of chemical industry organisations and regulators, and he continues to do so.</p>
<p><b>Davidson Medal</b></p> <p>The Davidson Medal recognises individuals who have been activementors in industry or academia.</p>	<p><b>Vince Pizzoni</b></p>	<p>"I can't think of an individual who has individually supported more early career chemical engineers than Vince from his wider initiatives trying to share his knowledge as widely as possible to the dozens of exchanges and messages of support he has with individuals every single day." Prof Chris Dodds, University of Nottingham</p>

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<p><b>Hanson Medal</b></p> <p>The Hanson medal is awarded to the author or authors of the best article to appear in <i>The Chemical Engineer</i> magazine each year.</p>	<p>Christopher Honig, Shannon Rios and Eduardo Oliveira (University of Melbourne, Australia)</p>	<p>The Hanson Medal is awarded to Christopher Honig, Shannon Rios and Eduardo Oliveira (University of Melbourne, Australia) for their article, “A Tool for Learning: Classroom Use-cases for Generative AI”. This article presents a forward-looking appraisal of how AI can be used as a tool for chemical engineering teaching with though provoking case studies of how to adapt to this quickly changing landscape.</p>
<p><b>Hutchison Medal</b></p> <p>The Hutchison Medal is awarded for both practical and wide-ranging, philosophical or thought provoking published papers.</p>	<p>Hanchu Wang, Prodromos Daoutidis, Qi Zhang (University of Minnesota, USA)  &amp; Yan Cui, Jianghong Liu, Beihu Cong, Xin Han, Sumiao Yin (Shanghai Maritime University, China, and Tongji University, China</p>	<p>The medal is being jointly awarded wo two papers this year:</p> <p><b>Ammonia-based green corridors for sustainable maritime transportation - <i>Digital Chemical Engineering, Volume 6, March 2023, 100082</i></b></p> <p>“Ammonia-based green corridors for sustainable maritime transportation” presents a <b>thought provoking and visually stimulating vision of future optimal green shipping trade routes and energy</b> supply and infrastructure, all of which is based on a sound modelling and optimization.</p> <p><b>Characterization and assessment of fire evolution process of electric vehicles placed in parallel - <i>Process Safety and Environmental Protection, Volume 166, October 2022, Pages 524-534.</i></b></p> <p>“Characterization and assessment of fire evolution process of electric vehicles placed in parallel” presents a striking and unique study of how electric vehicle fires can develop and propagate which not only brings home the risk but also provides data to better plan for their management.</p>

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<p><b>Macnab-Lacey Prize</b></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>University College London - Greg D'Silva, Dhilan Patel, Saranya Saravanan, Joan Tang and Shaun Tan</p>	<p>The Award of the Mcnab-Lacey Prize this year is presented to the team from the University College of London for their project "Sustainable Production of Bisphenol-A from Cumene". The judges indicated that the submission is very well and logically written. The evaluation panel thought that Overall, there are very good considerations of sustainability principles in the design exercise, particularly in terms of environmental and resource sustainability and process safety, also with some considerations on the social dimension. Several metrics were calculated based on a gate-to-gate LCA, including CO2 emission, water consumption and energy demand. Energy demand not normalized. NPV and payback reported for economics. Social impacts were also discussed.</p>
<p><b>Morton Medal</b></p> <p>The Morton Medal is awarded to the individual who has best demonstrated excellence in chemical engineering education. In particular, it looks to recognise the work of outstanding educators as well as 'game changers', and to promulgate best practice in chemical engineering education.</p>	<p>Thomas Rodgers</p>	<p>Dr Thomas Rodgers has been inspiring chemical engineering students at Manchester for several years winning several awards and including an extensively viewed YouTube channel. He has developed training courses for Graduate Teaching Assistants across Manchester. Additionally, he has gained significant impact externally through workshops and a large number of scholarship publications relating to chemical engineering education.</p>
<p><b>Senior Moulton Medal</b></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>Maximilian Theisen, Kenji Flores, Lukas Balhorn, Artur Schweidtmann, Delft University of Technology, The Netherlands</p>	<p>The authors from Delft University of Technology were awarded this medal for their paper: <i>Digitization of chemical process flow diagrams using deep convolutional neural networks - (Digital Chemical Engineering, volume 6, March 2023, 100072)</i></p> <p>The paper provides a novel method for digitizing process flow diagrams which includes unit operations and connectivity detection. This enables thousands of PFDs to be mined from diverse sources to provide new accessible libraries and, ultimately, be an enabler for future AI applications in the chemical engineering domain.</p>

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<p><b>Nicklin Medal</b></p> <p>The Nicklin Medal is an early careers award and was introduced in 2014 to recognise talented chemical engineering researchers. Nominees must, at the time of the awards nomination deadline, have no more than ten years postgraduate research experience and should have produced international quality research outputs.</p>	<p><b>Binjian Nie</b></p>	<p>Binjian Nie is being recognized for excellence in research and impact in the field of thermal batteries. With an exemplary track record in academic outputs and industrial achievements for his career stage, he pioneered thermal batteries for green chemical process engineering and sustainable chemical and fuel production.</p>
<p><b>Trustees Medal</b></p> <p>The Trustees Medal is awarded to a volunteer who has given exceptional service to an IChemE project.</p>	<p><b>Margaret Donnan</b></p>	<p>Margaret Donnan has been awarded the IChemE Trustees Medal for her transformative leadership as Chair of the IChemE Safety Centre (ISC) from 2016 to 2022. Under her stewardship, the ISC grew significantly, doubling its company membership and tripling its partners, a testament to her effective governance and ability to attract and retain members. Her role extended beyond administration, actively engaging in keynotes, chairing sessions, and advocating for ISC across various platforms. Additionally, Margaret played a crucial role in establishing the Major Hazards Committee (MHC), effectively leading the committee through challenging initial meetings and applying her skills in managing hybrid meeting environments. Her dedication, mentorship, and leadership within IChemE, both in the ISC and MHC, highlight her significant contributions to the field and her worthiness of the Trustees Medal.</p>
<p><b>Junior Sargent Medal</b></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. The contribution could encompass, but need not be limited to, a concept that has promoted much interest, the solution of an unsolved problem, new methods/tools leading to innovative processes/products, or a significant advance of the state of the art within the area of process systems engineering.</p>	<p><b>Qi Zhang</b></p>	<p>Qi Zhang has made novel and fundamental advances in process systems engineering and in its application to sustainable engineering. He has developed new techniques for industrial demand side management, adjustable robust optimisation and inverse optimisation and has applied these to industrial decarbonization and to mapping the role of green ammonia in the energy transition.</p>