

INSTITUTE OF ADVANCED STUDIES

NANYANG
TECHNOLOGICAL
UNIVERSITY

Catalyse high-impact research | Transcend disciplinary boundaries | Expand knowledge & education frontiers

FEATURED ARTICLES

When Nanoscience Took A Twist

2026 Kavli Prize in Nanoscience



Rotating two atomic layers by just a tiny fraction unlocks an entirely new world of quantum physics. Discover how 2026 Kavli Prize in Nanoscience winners Professors Eva Andrei, Pablo Jarillo-Herrero and Allan MacDonald pioneered “twistronics,” transforming simple sheets of carbon into a remarkable playground for exploring superconductivity and other exotic quantum phenomena.

[Read more](#)

Educating with AI: Shaping Future Learning



How can educators harness AI while preserving critical thinking and academic integrity? Our 4th Learning Journey to the College of Science brought together pre-university educators and MOE leaders to explore AI-enabled teaching strategies, engage in thought-provoking discussions, and experience innovative approaches to learning that are shaping the future of education.

[Read more](#)

EVENT HIGHLIGHTS

IAS STEM Graduate Colloquia and Discovery Science Seminars Jointly Organised with the Graduate Students' Clubs

Chiral Dynamics in Gold Nanoparticles and Perovskites



Discover how Asst Prof Sankaran Ramesh (Indian Institute of Technology Kharagpur) explored ultrafast chiral dynamics in gold nanoparticles and perovskite lattices, revealing how light and matter interact at extraordinary speeds to advance future optoelectronic technologies, quantum materials, and nanoscience breakthroughs alike.

[Read more](#)

Safeguarding Biodiversity in a Changing World



How can science stay ahead of the biodiversity crisis? Asst Prof Zeng Yiwen (ASE and SSS, NTU) highlighted how advances in ecological modelling, remote sensing, and geospatial data are redefining conservation, enabling researchers to identify priority habitats and develop more effective strategies for protecting biodiversity.

[Read more](#)

Can Molecules Learn to Harvest Light?



From molecular chaos to light-harvesting order, Prof Maxim Pchenitchnikov (University of Groningen) explored how simple molecules self-assemble into synthetic antennas that mimic nature. His fascinating research offers new perspectives on nanotechnology, spectroscopy, and designing the next generation of functional molecular materials.

[Read more](#)

Defects Activity in Metal Halide Perovskites



Uncover how tiny atomic-scale defects shape the performance of advanced perovskite optoelectronics. Prof Annamaria Petrozza (Italian Institute of Technology) shared cutting-edge insights into defect photochemistry, charge-carrier dynamics, and strategies to enhance the efficiency and long-term stability of emerging semiconductor devices.

[Read more](#)

UPCOMING EVENTS

IAS Frontiers Conference on Geometry, Dynamics and Learning

IAS Frontiers Conference on Geometry, Dynamics and Learning

28 - 29 Sept 2026, Nanyang Executive Centre

[Register now](#)

GLOW2026

GLOBAL Conference for Women Leaders and Emerging Researchers
in Materials Science

Global Conference for Women Leaders & Emerging Researchers in Materials Science (GLOW 2026)

29 Sept - 1 Oct 2026, Wee Cho Yaw Plaza Auditorium

[Register now](#)

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