NSCC SINGAPORE

NEWSBYTES

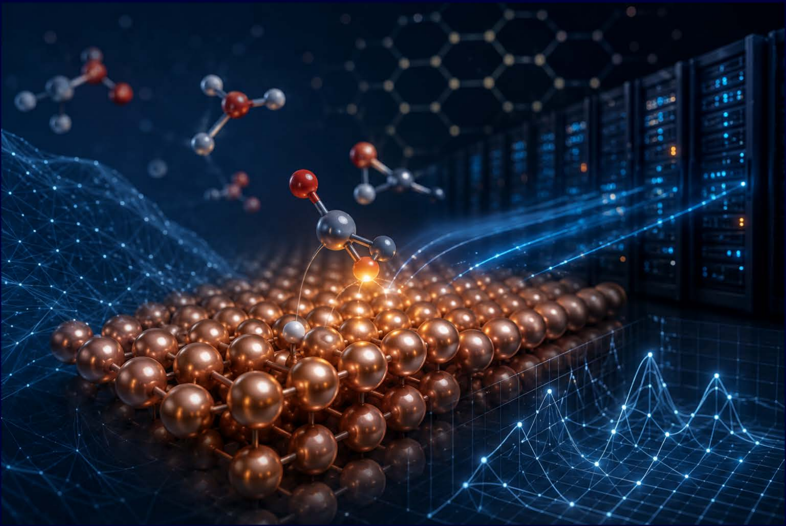
Monthly E-Newsletter by NSCC Singapore

CORPORATE NEWS

A snapshot of NSCC's key updates and ongoing collaborations

Featured Read of the Month!

CatPlat: Automated Simulation Workflows for Data-Driven Materials Discovery



Catalysis plays a critical role in modern

This can involve running thousands of

manufacturing, driving more than 85% of its processes. In particular, heterogeneous catalysis—a chemical process where the catalyst and reactants exist in different physical states, such as solid, liquid or gas—is fundamental to petroleum refining, fertilizer production, emissions control and the conversion of renewable feedstocks into fuels and valuable chemicals.

Discovering new catalysts, however, is an exceptionally complex and computationally intensive process. Researchers need to study and compare many different materials, surfaces and possible reaction sites to understand how effectively a material could act as a catalyst.

simulations before promising candidates are identified. Traditional computational workflows for heterogeneous catalysis can also involve steep learning curves, rapidly increasing complexity and time-consuming, tedious processes.

To address these challenges, researchers from the Agency for Science, Technology and Research Institute of Advanced Intelligence and Computing (A*STAR IAIC) developed CatPlat (Catalysis Platform), a Python-based platform designed to automate large-scale computational simulations for catalyst research.

Read more

SCA2027
Supercomputing Asia
Gathering the Best of HPC in Asia
Call for Submissions Now Open!

SCA2027: Call for Submissions Now Open!

The SCA2027 Call for Submissions is now open! We invite researchers, scientists, industry practitioners and computational experts to submit their work across Papers, Posters, Workshops, Tutorials and Birds of a Feather (BoF), and be part of shaping the SCA2027 programme. More details on keynote speakers, session tracks, and registration will be unveiled in the coming months.

Read more

Years with
NSCC
Charting the Future of Innovation

NSCC's 10th Anniversary Dinner: Celebrating a Decade of HPC People and Impact

On Friday, 31 July 2026, National Supercomputing Centre (NSCC) Singapore hosted our 10th Anniversary Dinner at Mandarin Oriental Singapore to celebrate our journey over the past decade, reflecting on key milestones and reaffirming our commitment to advancing Singapore's research and innovation ecosystem in the years ahead.

Read more

Driving AI Innovation: NSCC Hosts Digital Industry Singapore (DISG) at the ASPIRE 2A and 2A+ Data Centre

NSCC welcomed representatives from DISG to the NSCC i4.0 Data Centre, home to Singapore's ASPIRE 2A and ASPIRE 2A+ supercomputers, to learn more about Singapore's national High Performance Computing (HPC) infrastructure and establish shared strategies to strengthen the broader technology ecosystem.

Read more

NSCC and VAST Data Workshop:

Modernizing Analytics and AI Workloads

This month, NSCC and VAST Data organised a VAST Data Demo Learning Session to explore how a unified data platform can support the growing demands of high performance computing (HPC), modern analytics and enterprise AI.

The workshop demonstrated how bringing structured, unstructured and vector data together on a scalable platform can reduce data silos, simplify data management and enable organisations to derive insights from their data more efficiently.

Read more

Empowering Research:
Inside NSCC Singapore’s ASPIRE 2A Workshop

While NSCC’s supercomputers provide the immense computing power needed to support advanced research, knowing how to effectively harness these resources is just as important in turning compute into meaningful outcomes.

Read more

THE LAST BYTE

Shared reads and cool finds from the HPC World

Photo Credit: NUS News

NUS powers education, research and administration to new heights with AI through a strategic collaboration with OpenAI

The National University of Singapore (NUS) is supercharging its artificial intelligence (AI) ecosystem with a new addition to its expanding suite of AI resources, enhancing support for its community across all key functions. Today, the University announced a strategic collaboration with OpenAI, a leading research and deployment AI company, aimed at augmenting the University's AI capabilities.

Read more

JCTC
Journal of Chemical Theory and Computation
April 14, 2026 Volume 22 Number 7 pubs.acs.org/JCTC

SDSC's Expanse Helps Researchers Identify Errors in Triplet-State Chemistry

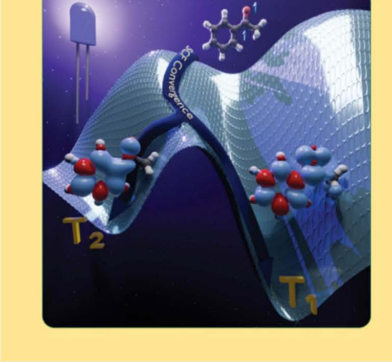


Photo Credit: The Journal of Chemical Theory and Computation

Calculations

Chemists often use a computational method developed at UC San Diego called density functional theory (DFT) to study chemical reactions and predict how molecules behave. DFT is especially useful for investigating triplet states, which are high-energy electronic states that play important roles in processes such as combustion, atmospheric chemistry and the development of new materials.

Read more

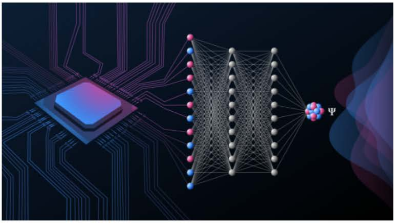


Photo Credit: Jane Kim/Argonne

Argonne: STREAMLINE Uses AI to Tackle One of Nuclear Physics’ Toughest Problems

At the heart of every atom lies a tightly bound cluster of protons and neutrons — a system governed by some of the most complex interactions in nature. Understanding how these particles behave is one of the central challenges of nuclear physics. Now, a project called STREAMLINE is taking on that challenge using a powerful combination of artificial intelligence (AI) and supercomputing.

Read more

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