Scientific Achievement
Scientists created and tested a new algorithm, a form of artificial intelligence (AI), that can make autonomous decisions to define and perform the next step of an experiment without human interaction at a x-ray scattering instrument.

Significance and Impact
By improving the way researchers do their experiments, they are liberated from micro-managing their experiments and can tackle more complex challenges in a faster and more efficient way, leading to quicker materials discovery for new technologies.

Research Details
• The CMS beamline, operated in partnership between NSLS-II and CFN, was used for X-ray scattering experiments employing the algorithm that was developed by CAMERA at Berkeley Laboratory.
• The tests showed that the algorithm measured samples more efficiently than a traditional approach.


Work was performed in part at Brookhaven National Laboratory