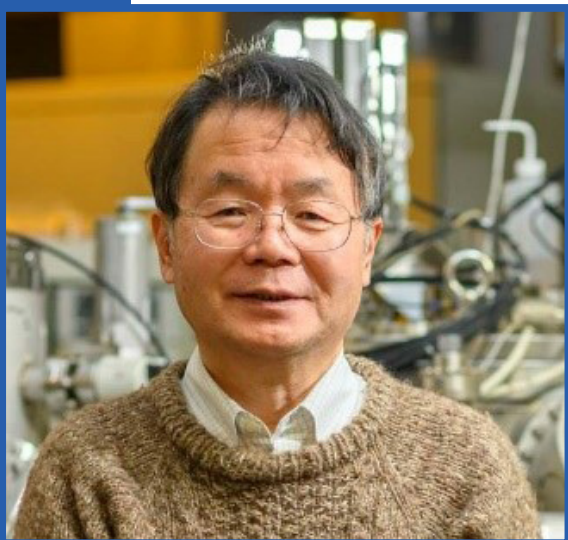


**The UB Department of
Physics Presents:**

The Eighth Ta-You Wu Memorial Lecture

Friday October 14th, 5:00PM
NSC 215 • UB North



Excitement in Materials Research: From material design to social implementation

Prof. Hideo Hosono

Tokyo Institute of Technology & National Institute for Materials Science, JAPAN

Materials science is a cross-disciplinary subject bridging physics and chemistry, and fundamental science and applications. The most fascinating thing in materials research is huge impact on our society if research is successful and meets with demands.

We have studied electronic functionality in wide gap oxide-based materials over 20 years aiming at cultivation of new frontiers in fundamental science and applications. In this talk I introduce three excitements in my materials research., i.e. (1) from basic idea of transparent amorphous oxide semiconductors as a novel class of amorphous semiconductors to their TFT application (IGZO) in flat panel displays, (2) from creation of stable electride to catalysts for green ammonia synthesis, and (3) from discovery of iron-based superconductors to finding of excellent grain boundary nature advantageous for magnet fabrication.



Hideo Hosono received a Ph.D. in Applied Chemistry from Tokyo Metropolitan University in 1982, and became a full professor at Tokyo Institute of Technology in 1999. He is an honorary and institute professor, and the funding director of materials research center for element strategy of Tokyo Tech and a distinguished fellow at National Institute for Materials Science. His research focus is creation of novel functional materials. The representative achievements are material design of transparent amorphous oxide semiconductors such as IGZO and their TFT applications for flat panel displays, creation of stable electrides and their application to catalysts, and discovery of high-T_c iron-based superconductors. He is a recipient of various honors including the Japan Prize, von Hippel Prize (MRS), J. McGroddy Prize (APS), Jan Raychman Prize (SID), Imperial & Japan Academy Prize, Thomson Reuter Citation Laureate, and a foreign fellow of the Royal Society.



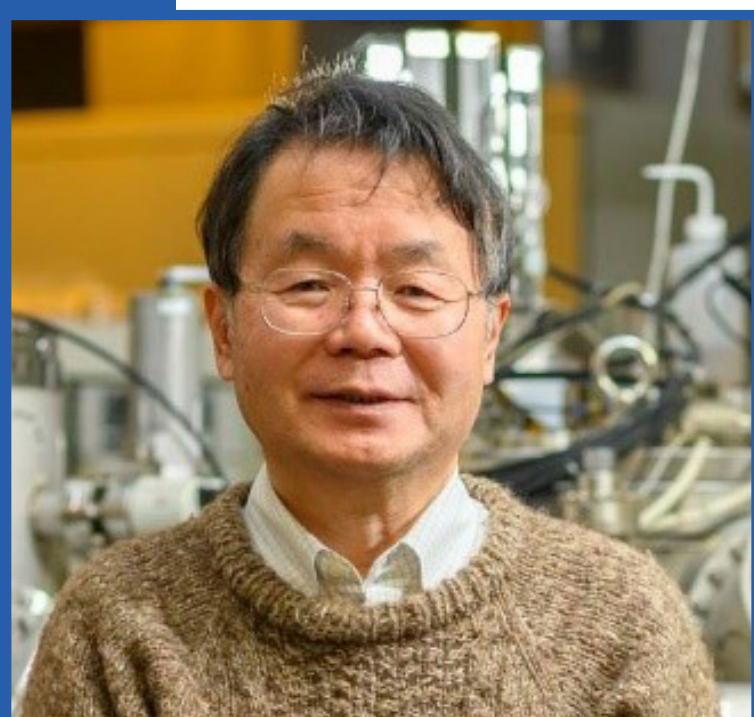
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