

The UB Department of Physics Presents:

The 2022 Ta-You Wu Memorial Lecture

Friday, April 29th

5:00PM

NSC 225 UB North



The Lithium Battery: From a Dream to Readiness to Take-On Climate Change

Prof. Stanley Whittingham, Binghamton University

The Nobel Prize in Chemistry 2019 for the development of lithium-ion batteries

The current global climate challenges call for serious attention to carbon-free renewable energy technologies such as solar and wind, in addition to hydro and nuclear. The former two are intermittent producers of energy, so storage is essential. Batteries provide the most flexible means of storing electrical energy, varying in size from milliWatt-hours to gigaWatt-hours and being portable or fixed. Lithium-ion batteries dominate this storage. I will discuss their origins, their present status and the challenges facing us if we are to further increase their energy density and reduce their cost whilst increasing safety and lifetime.



Stanley Whittingham was born in Nottingham in Great Britain. He studied at Oxford University and completed his doctorate there in 1968. He is currently a professor at the State University of New York at Binghamton. In the 1970s, Dr. Whittingham developed an innovative cathode in a lithium battery. Dr. Whittingham's contributions were crucial for the development of lithium-ion batteries, which are used in mobile phones and electric cars. Dr. Whittingham was awarded the Nobel Prize in Chemistry in 2019 for the development of lithium-ion batteries.

