



DR. MEHMET NURULLAH ATEŞ

Ateş has extensive experience with cathode and anode materials for Li-ion batteries. He obtained his Ph.D. from Northeastern University, Boston, MA under the supervision of Prof. K.M. Abraham, one of the pioneers in Li-ion battery field and inventor of Li-air batteries. His Ph.D. dissertation was evolved around next generation lithium rich cathode materials for Li-ion and advanced catalysts for Li-O₂ batteries. During his PhD, he worked on mitigating voltage fade in next-generation lithium rich layered-metal oxide materials. He synthesized and investigated their atomic structure using high resolution HRTEM and XAS via synchrotron light source in Brookhaven National Lab, in which he was the principal investigator. He also developed a model where the catalyst in Li-O₂ batteries can be prepared from spent Li-ion battery cathode materials, an approach which aims to recycle used Li-ion batteries. He was a researcher on a micro battery project which was awarded by Department of Defense and Lockheed Martin. Later he was also a researcher on a lithium Air battery project which was funded by US Army CERDEC, Army Power Division. He defended his PhD in 2015 at Northeastern University.

In late 2015, he joined Xerion, a mature startup company located in University of Illinois at Urbana-Champaign. At Xerion, he has developed high voltage protective coating for cathode materials, conductive coating for next-gen anode materials to achieve long cycle and has been heavily involved in LCO production. He was the Manager of Technical Development at Xerion until he left it in 2020. At Xerion, he was managing technical aspects of large government and industrial contracts. He was also Co-PI and TPO on behalf of Xerion for a prestigious fund awarded by DARPA in 2018. He has filed 6 patent applications before he left Xerion.

In 2020, he was awarded by the Turkish Government under the prestigious award by TUBITAK coded with 2232, known as international fellowship for outstanding researchers. With this program, along with his team, which consists of 4 researchers, 4PhD students and 1 post-doc, he aims to bring his both academic and industrial experiences to young researchers in Turkey. His major objective with this program to achieve an energy density of 800Wh/L lithium-ion battery while offering extreme fast charge capabilities reaching 80% SOC in less than 20 minutes. He also holds chief senior researcher position at TUBITAK-RUTE where he assists other classified projects. Currently he is managing technical aspects of RUTE's battery activities. These include but not limited to the following projects: Academic, EU projects and international bilateral collaboration and industrial projects.