

Biography: Carter W. Abney, Ph. D

Dr. Carter W. Abney earned B.S. degrees in chemistry and theoretical mathematics from the University of Wisconsin in 2005. In 2007, he graduated from the University of North Carolina with a M.S. degree in chemistry, before working as an Analytical R&D Scientist and ORISE Fellow at the Centers for Disease Control and Prevention. In 2012 he resumed his doctoral studies and in 2015 earned a Ph. D. in Inorganic Chemistry from the University of Chicago under the guidance of Professor Wenbin Lin. From 2015 – 2018 he worked in the Chemical Sciences Division of Oak Ridge National Laboratory as the Eugene P. Wigner Fellow, using synchrotron x-rays and neutron scattering techniques to research the effects of metal coordination on polymer morphology and the resulting physicochemical properties. From 2018 – 2021 he worked at ExxonMobil Research & Engineering Company in their Corporate Strategic Research Division, developing new materials for CO₂ capture. In 2021 he joined Borregard USA as a Research Associate in their Biopolymers Division, researching lignosulfonate additives for lead and lithium batteries. He now serves as the global technical application manager for batteries.

Carter has published over 50 peer-reviewed journal articles, filed more than 14 patents and patent applications, and has received numerous awards and recognitions including the ExxonMobil Global Technology Award, the ACS Industrial & Engineering Chemistry Division Early Career Fellow, the I&EC Research 2017 Class of Influential Researchers, a UT-Battelle Research Accomplishment award, and recognition from the US Department of Nuclear Energy for Innovations in Fuel Cycle Research.