



# Exponent<sup>®</sup>

Engineering & Scientific Consulting

## Sam Lawton, Ph.D., CSci

Managing Scientist | Materials Science and Electrochemistry

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## Professional Profile

Dr. Samuel Lawton specializes in the field of energy storage devices with an emphasis on failure analysis and quality assessment. He has diverse experience in design, testing and failure mode analysis of both commercial lithium-ion batteries and prototype secondary batteries that utilize a variety of cathode and anode materials (including lithium metal).

Additionally, Dr. Lawton has an extensive knowledge in the synthesis and characterization of polymers and materials for commercial research applications.

Prior to joining Exponent Dr. Lawton conducted research in the development of Li metal anodes in secondary cell devices which utilized a variety of cathode chemistries and technologies. He worked on the development of novel Li metal anode polymer protections for the prolongment of cycle life whilst maintaining a high energy density. Further work included the development and processing of composites for solid state cathodes and testing in prototype devices. He has also work on the characterization of complex polymeric materials utilizing a wide variety of materials characterization techniques.

Samuel's Ph.D. was focused on polymer and materials chemistry, developing and characterizing semiconducting copolymers for application in next generation photovoltaic device with extensive experience on thin film formation and surface characterization.

## Academic Credentials & Professional Honors

Ph.D., Chemistry, University of Warwick, UK, 2018

M.Chem., Chemistry, University of Warwick, UK, 2014

IOM3 UK Young Lecturer of the Year, 2018

## Licenses and Certifications

Chartered Scientist (CSci)

## Prior Experience

Research Scientist, Oxis Energy, 2018-2021

Research Technician, Polymer Characterisation Research Technology platform, University of Warwick, 2017-2018

Graduate Research Student, University of Warwick, 2014-2018

## Professional Affiliations

MIMMM – Member of the Institute of Materials, Minerals and Mining (IOM3)