

Louis De Taeye

Hightech & Electronics

Trainee Patent Attorney

T +32 16 24 08 54
l.detaeye@vo.eu

Louis started at V.O. in 2021, after obtaining his PhD in bioscience engineering at the KU Leuven. He specialized in Li-ion battery technology in his doctoral research. During his education he worked at Columbia University in New York for several months as a visiting scholar, where he created numerical models for electrochemical systems.

Louis worked at the interuniversity institute for microelectronic components (imec) in Leuven during his PhD, where he conducted fundamental strategic basic research on Li-ion batteries. The goal of the doctoral research was the development and characterization of mixed Li-ion and electron conducting coatings for Li-ion batteries. This research enabled him to exploit a plurality of advanced characterization techniques from the semiconductor industry on Li-ion battery systems and required thorough understanding of electrochemistry and physics.

The experimental research was complemented by numerical models which he developed at Columbia University in NYC. Optimization was done using Monte Carlo Markov chains.

Education

- Doctor of Bioscience engineering (KU Leuven)
- Master of Nanoscience, Nanotechnology and Nanoengineering (KU Leuven)
- Bachelor in Physics and Astronomy (UGent)

Publications

- De Taeye, Louis & Teirlynck, Ian & Vereecken, Philippe. (2021). The Role of Electronic Junctions in Artificial Interface Engineering: The Case for Indium Tin Oxide on LiMn2O4 Electrodes. Advanced Functional Materials
- De Taeye, Louis & Hubrechtsen, Liese & Teirlynck, Ian & Vereecken, Philippe. (2021). In-depth Study of Structural, Morphological and Electronic Changes during Conversion and Alloying of ITO. Journal of Materials Chemistry A
- De Taeye, Louis & Vereecken, Philippe. (2021). Detrimental MnPO4F and MnF2 formation on LiMn2O4 in the 3 V region. Journal of Materials Chemistry A
- De Taeye, Louis & Mees, Maarten & Vereecken, Philippe. (2020). Surpassing the 1 Li/Ti Capacity Limit In Chlorine Modified TiO2-yCl2y. Energy Storage Materials

Languages

- Dutch
- French
- English