

Triboelectrochemistry:

An introduction based on experimental results

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Triboelectrochemistry is a very interdisciplinary field where chemists, physicists, materials scientists and engineers meet to better control friction and wear in sliding contacts – from the nanoscale to industrial applications. The high importance of this topic stems from the observations that friction often occurs on wet surfaces, i.e. electrodes, and that electrochemistry offers a way to control and modify friction.

Within this presentation a comprehensive introduction of friction in electrochemical environments based on experimental results is provided – from the first mention by Edison in 1875 to current investigations by dedicated instruments. Additionally, electrochemical foundations and design guidelines for electrochemical cells will be shortly discussed.