

## *The Role of Isothermal Microcalorimetry in Battery Development*

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Isothermal microcalorimetry is a versatile method to detect heat dissipated or adsorbed in all kinds of processes. Thus TA Instruments put a focus on the quickly developing market for batteries with respect to product safety but also in R&D of innovative battery materials.

The well-known TAM IV offers a lot of opportunities, for example it is excellent to investigate parasitic reactions while running charge-discharge cycles. TAM IV provides precise data on self-discharge of all kinds of batteries that is required in safety assessments or quality control and its unique sensitivity allows to record the low heat flow of medical batteries like pacemakers and defibrillators. Furthermore TAM is capable of testing stability and compatibility of required components in the research of new types of batteries.

This talk should give a glance into different applications relevant for battery research. The Micro XL calorimeter has been added to the well-proven instrumentation of the TAM IV to enable a high variety of battery types to be investigated.