# Conferencia

## Marilena Mancini

Team Leader at ZSW, Germany
Zentrum für Sonnenenergie und Wasserstoff-Forschung Baden-Württemberg

Universidad del País Vasco · Euskal Herriko Unibertsitatea
DOKTOREGO ESKOLA · ESCUELA DE DOCTORADO · DOCTORAL SCHOOL

## The role of graphite in Li-ion battery technology: from production process to recycling perspectives

Graphite plays a crucial role as an anode material in Li-ion batteries, enabling efficient lithium-ion storage and release due to its high conductivity, capacity, and stable structure. Effective graphite recycling is essential for a circular economy and to address critical raw material shortages. Nevertheless, traditional recycling processes often neglect graphite and focus on cathode recycling. A thorough understanding of the correlation between particle properties and electrochemical performance is needed to enable efficient recycling. The production of battery-grade graphite and cathode materials via direct recycling from spent cells has been validated on a laboratory scale with high efficiency to support the industrialization.

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***Conferencia válida como Actividad de Formación en el Programa de Doctorado en Ciencia y Tecnología de Materiales***