



Universität Ulm

Inst. für Energiewandlung und -speicherung

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Institut für Energiewandlung und -speicherung

Leiter(beurlaubt): Prof. Dr. Josef Kallo

Komm. Leiter: Prof. Dr.-Ing. Jian Xie

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Bachelor-/Master thesis

A Bachelor/Master Thesis in the field of “Communication Tracks of Solar Modules” is available at the Institute of Energy Conversion and Storage (EWS).

Thesis work description

With the emerging Green economy, batteries have gained popularity. The best example is the Tesla power wall and solar roof. However, the underlying technology is highly dependant on the ‘communication’ of different electronic devices. In EWS, we are implementing emerging technology to solar modules using power lines to transmit signals safely. The Thesis has its focus on hardware construction and testing.

- Introduction to Solar Modules, H-bridge and Communication technology
- Development of a concept for communication
- Draft of communication protocol
- Simulations of Solar modules in Matlab-Simulink
- Development of simple test stand
- Testing of Prototype
- Validation of Model

During the Thesis, you would gain practical and theoretical knowledge about solar modules and communication technology. Previous knowledge of communication technology, Matlab and Simulink will be beneficial. A structured and independent working method is a prerequisite.

For further information, please contact:

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