Student for a Master Thesis (f/m/d): Development of a novel battery concept for rural electrification

Rural electrification in countries of the global south is one of the millennium goals for the next decade. To store renewable energy from photovoltaic and wind sources more suitable battery systems are urgently required. The current generations of Li-Ion batteries are optimized for high energy density applications such as e-mobility – but not necessarily for the requirements of a stationary, seasonal energy storage system.

For this purpose, we are looking for a motivated student to help us to analyze the economics of our novel battery concepts based on abundant and cheap raw materials which is also capable to function as a seasonal storage.

You will be working in close collaboration with your supervisor in laboratories with state-of-the-art equipment for cell fabrication and characterization. The project is embedded in an industry consortium with several start-up companies in the field of off-grid power supply and aims for quick and application-relevant solutions.

Solar modules in Uganda (© Engineers without borders Freiburg)

Your profile

- You are a student in engineering, physics, chemistry; ideally with voluntary experience in development cooperation projects
- You are highly motivated to work in the field of energy storage, sustainable technologies
- A high level of team spirit and strong intercultural communication skills are mandatory for this cross-national project.
- (optional) experience in: lab work, electrochemistry, battery management, electronics

The position

- We offer excellent working conditions in the young and interdisciplinary “electrochemical energy systems” group
- Your project is embedded in a consortium with several start-up companies for rural electrification with a short “idea to market” pathway
- The working language is Englishor German

Please send your application including CV, transcript of records and short motivation letter via e-mail to
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The junior research group "Electrochemical Energy Systems" works on fuel cells, batteries and electrolyzers. The group is dedicated to integrate latest material developments into state-of-the-art electrochemical energy systems.

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