Going green with batteries

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Video Byte

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Abstract

The future of renewable energy has never looked greener Amid a changing climate and dwindling fossil fuel resources renewable energy technology is quickly gaining traction But one big obstacle is the uncertainty in renewable energy production While rechargeable lithium-ion batteries could help cushion swings in wind and solar their metallic components tend to be expensive and time-consuming to produce and pose a big electronic waste problem For that reason, researchers are turning toward more eco-friendly materials for batteries So-called organic electrodes are highly stable, easy to process, and energy-dense Like their inorganic counterparts, they shuttle lithium ions into and out of their chemical structure to deliver power And because they are largely carbon-based, they're naturally abundant and even recyclable Scaling up the production of these materials remains an issue But already they point to a much greener future for renewable energy Oubaha et al. "Carbonyl-Based π -Conjugated Materials: From Synthesis to Applications in Li-Ion Batteries." ChemPlusChem (2019)