Organic and metal-organic materials for potassium battery cathodes

Roman Kapaev

Abstract: Although lithium-ion batteries are very popular, this technology is not sustainable. Lithium is an uncommon element, most of which is mined in only few countries, making the whole industry dependent on the import. Transition metals, such as cobalt, nickel and copper, might be toxic and also make batteries more expensive. Switching to organic-based batteries that rely on widespread elements, such as potassium, might solve the sustainability problems. This talk aims at reviewing existing organic-based cathode materials for potassium batteries.