

Light-active Electrodes Towards Photo-chargeable Batteries

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Currently, there is an increasing emphasis surrounding the development of autonomous power sources in more sustainable ways because of their impact on the further development of electric cars, wearable electronics, solar-planes, spacecraft, humanoids/robots and drones is self-evident. Photo chargeable Li ion batteries that can simultaneously convert and store energy at a single device are highly promising for the above applications. Here I highlight novel approaches and material combinations involving nanostructured lithium iron phosphate¹/organic dye² and layered organo-halide perovskites³ that have recently been evaluated in photo-batteries. The results call for more concerted efforts to develop new electrode designs that can concurrently optimise light-conversion, energy-storage and mechanical stability over battery cycling.

References:

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