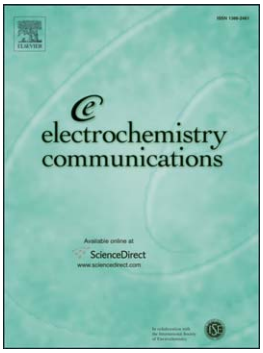

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Enhanced performance of organic materials for lithium-ion batteries using facile electrode calendaring techniques

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Abstract

A simple and convenient strategy for achieving higher capacities in organic electrode materials used in pouch-cell format is presented here. By calendaring of the electrodes, the resulting electrode porosity can be tailored. For carboxylate electrodes of dilithium benzenediacrylate, it is shown that a 30 % porosity constitute the best compromise between electronic wiring, particle contact and electrolyte infiltration into the electrodes, displaying higher capacities than in Swagelock cells.

Keywords: Li-batteries, organic electrodes, pouch cell, calendaring, capacity retention