Mini Review

Copper Based Materials as Anode and Cathode Materials for Lithium Ion Batteries

Gang Lei^{1*} and Chunxiang Xu²

¹ School of Mechatronics & Vehicle Engineering, Zhengzhou Institute of Technology, Zhengzhou, Henan 450044, PR. China

² School of Civil Engineering, Zhengzhou Institute of Technology, Zhengzhou, Henan 450044, PR. China;

*E-mail: htx510@21cn.com

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With the increasing demands on energy density and power capacity of lithium ion secondary batteries, people begin to look for electrode materials with better capacity and performance. Copper based materials have been considered as ideal additives to improve the electrochemical properties of lithium ion batteries due to their unique nanostructures, high conductivity and thermal conductivity. The applications of copper-based nanomaterials in electrode materials are reviewed. This article discuss the physical, transport and electrochemical behavior of copper-based nanocomposites. This article also discuss the challenges faced by the applications of copper-based nanocomposites and their future development prospects.

Keywords: Lithium ion battery; Copper based materials; Nanocomposite; Anode; Cathode

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