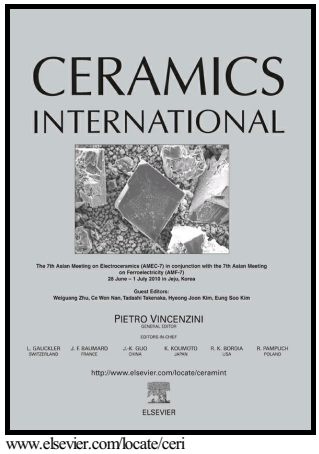

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Devendrasinh Darbar[1,2,3], M.R. Anilkumar[4], Vijayaraghavan Rajagopalan[2], Indranil Bhattacharya[3], Hendry Izaac Elim[5], T. Ramakrishnappa[6], F. I. Ezema[7], Rajan Jose [8], M.V. Reddy[1,9*],

[1]Department of Physics, National University of Singapore, Singapore 117542

[2]School of Advanced Sciences, Department of Chemistry, Vellore Institute of Technology (VIT), Vellore-632014, Tamil Nadu, India

[3]Department of Electrical and Computer Engineering, Tennessee Technological University, Cookeville, TN 38505, USA.

[4]East West Institute of Technology, Bangalore, 560091 India

[5] Department of Physics Department, Pattimura University, Ambon 97233, Indonesia.

[6] Department of Chemistry, Dayananda Sugar Academy of Technology & Management Udayapura, Kanakapura Road, Bengaluru-560082

[7]Department of Physics & Astronomy, University of Nigeria, Nigeria 410001.

[8]Nanostructured Renewable Energy Materials Laboratory, Faculty of Industrial Sciences & Technology, Universiti Malaysia Pahang, 26300 Kuantan, Malaysia.

[9]Department of Materials Science and Engineering, National University of Singapore, Singapore 117546

Abstract

Optimization of electrodes for charge storage with appropriate processing conditions places significant challenges in the developments for high performance charge storage devices. In this article, metal cobaltite spinels of formula MCo_2O_4 (where M=Mn, Zn, Fe, Ni and Co) are synthesized by oxalate decomposition method followed by calcination at three typical temperatures, viz. 350, 550, and 750°C and examined their performance variation when used as anodes in lithium ion batteries. Phase and structure of the materials are studied by powder x-ray diffraction (XRD) technique. Single phase $MnCo_2O_4$, $ZnCo_2O_4$ and Co_3O_4 are