



Sol-gel Synthesis of Cobalt hydroxychlorides

By S. Ranganatha

LAP Lambert Academic Publishing Mrz 2018, 2018. Taschenbuch. Condition: Neu. Neuware - Co₂(OH)₃Cl has been prepared by a facile one pot sol-gel process. Two different solvents, ethylene glycol and glycerol are used for the synthesis. The resulting samples are studied for their morphology, structure and electrochemical stability upon cycling. The sample with ethylene glycol as solvent exhibits three dimensional porous interconnected xerogel morphology whereas that with glycerol shows a crystalline and non-porous nanoparticulate structure. The specific capacitance of the Co₂(OH)₃Cl prepared with ethylene glycol is 434 F/g, when the electrodes are cycled in 3 M KOH at a specific current 2 A/g and with that of glycerol it is 252 F/g. Interestingly, at a high current density of 25 A/g Co₂(OH)₃Cl with ethylene glycol and glycerol showed 143 F/g and 72 F/g respectively. Ethylene glycol significantly modified the structure and morphology so as to attain a mesoporous Co₂(OH)₃Cl with high surface area which in turn influenced its remarkable electrochemical behavior. With a significant specific capacity and electrochemical stability, the synthesized material is a novel potential candidate for supercapacitors 52 pp. Englisch.



READ ONLINE
[2.96 MB]

Reviews

This is the best pdf i actually have read till now. It typically fails to charge too much. Your life period will probably be transform the instant you total reading this publication.

-- **Dr. Don Morissette V**

This publication will not be simple to get started on looking at but quite entertaining to learn. It generally fails to cost an excessive amount of. You will not feel monotony at anytime of your time (that's what catalogues are for about if you ask me).

-- **Bettie Gutmann**