

Nanomaterials and nanofabrication for supercapacitors of improved energy density

Dr. Xuyuan Chen.

Founder of nanoCaps AS,

IMS, University of South-Eastern Norway

Xuyuan.chen@usn.no

In this talk, we summarize the commercialization activities in nanoCaps AS for supercapacitors with high energy density beyond the state of the art, which is startup company based on the research achievement at USN on nanomaterials and nanofabrication for energy storage technology. The patent technology for design a low dimension carbon material applied to the electrical double layer supercapacitors will be presented. The hybrid nano and micro-features that enable the growth of super porous carbon nanotube films have been fabricated. The record-high specific capacitance per feet-print area for carbon nanotube electrodes has been achieved at the level of 2.5F/cm². We also propose and demonstrate a feasible roll-to-roll fabrication process for the possible commercialization of the electrode.