

PRESENTER INFORMATION



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BIOGRAPHICAL SKETCH

Olena Okhay obtained her PhD in Materials Science and Engineering in November 2009. Her main scientific interests during PhD degree were: i) processing and characterization of ferroelectric films and ceramics; ii) structure, microstructure, dielectric, piezoelectric, magnetic properties of ferroelectrics and related materials. Her post-doc activities focused on the materials for energy harvesting and storage such as thermoelectrics, piezoelectrics, as well as materials for solar cells and electrochemical capacitors (called as supercapacitors). Her current work as researcher concentrated on 1D-2D carbon-family materials, different composites.

TITLE Porous aerogels of reduced graphene oxide for energy storage

ABSTRACT

Energy harvesting and storage is one of the most important topics of scientific research today. Reduced graphene oxide (rGO) is a promising material for improving the structural - electrical property relationship of thermoelectric materials (used to transform temperature gradient into electrical energy) and the structural - electrochemical property relationship of capacitive electrodes (used in supercapacitors and batteries). In addition, rGO aerogel, which has a large specific surface area, is a more promising material for energy storage compared to dense rGO membranes obtained by vacuum filtration. Thus, the preparation process of rGO, as well as composite materials based on rGO, plays a significant role in the final material and device performance.