Abstract Submitted
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Nanocomposite materials for radiation detection SUNIL SAHI, University of Texas at Arlington — Zinc Oxide (ZnO) based scintillators are an interest of research due to its fast decay time. Scintillator requirements include the high light-yield, fast decay time and high density. ZnO based scintillators have relatively low light yield and low density. The quantum efficiency of ZnO based scintillators can be improved by energy transfer from Cerium fluoride (CeF_3). Herein, CeF_3/ZnO nanocomposites were synthesized to enhance the light output of ZnO. As synthesized, nanocomposites were characterized with XRD, Photoluminescence and UV-Vis. The nanocomposites show significant enhancement in the photoluminescence intensity of the ZnO due to the energy transfer from CeF_3 nanoparticles.

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