Structural, morphological and 6 MeV er ectron dosimetric properties of Cu d SnO2 phosphor

Research Paper

Authors	Mahesh S Bhadane, Kishor ane, Ashish B Thorat, Ramakant P Joshi, Kaushik T Katre, Shailendra S Dahiwale, Vasant N Bhoraskar, Sanjay D Dhole
Publication date	2019/2/1
	JournalMaterials Research Express
Volume	6
Issue	5
Pages	055901
Publisher	IOP Publishing
Description	Cu doped SnO 2 (SnO 2: Cu) nano phosphor (NP) was successfully synthesized by one-step simple hydrothermal method and it was characterized by XRD (x-ray Diffraction) for structural, FESEM (Field Emission Scanning Electron Microscopy) for morphological and EDS (Electron Dispersive Spectroscopy) for elemental analysis. NP was annealed at 700 C for 2 h and its crystallinity for tetragonal phase was confirmed through XRD. The crystallite size was~ 10.39 nm for un-annealed and~ 18.16 nm for annealed samples which has been calculated using Scherer equation. The particle size was estimated to be~ 43 nm and the elemental composition of Sn, O, Cu was obtained by EDS. In addition, to study the dosimetric properties, the SnO 2: Cu phosphors were irradiated with 6 MeV electron beam at fluences ranging from 10× 10 11 e cm− 2 to 20× 10 12 e cm− 2 which is equivalent to the 1.55 kGy to 31 kGy. The …
Total citations	Cited by 6

2020 2021

Scholar articles
Structural, morphological and 6 MeV energy electron dosimetric properties of Cu doped SnO2 phosphor
MS Bhadane, KH Gavhane, AB Thorat, RP Joshi… - Materials Research Express, 2019
Cited by 6 Related articles All 3 versions