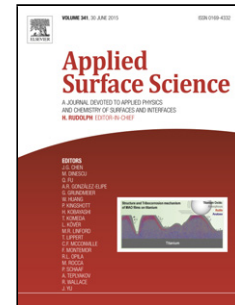


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Authors: G. Bakiyaraj, J.B.M. Krishna, G.S. Taki, K.  
Selvaraju, R. Dhanasekaran



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## 45 keV $N^{5+}$ ions induced spikes on CdS thin films: morphological, structural and optical properties

G. Bakiyaraj<sup>a,\*</sup>, J.B.M. Krishna<sup>b</sup>, G.S. Taki<sup>c</sup>, K. Selvaraju<sup>d</sup> and R. Dhanasekaran<sup>e</sup>

<sup>a</sup> Department of Physics and Nanotechnology, SRM Institute of Science and Technology (formerly known as SRM University), Kattankulathur- 603203, India

<sup>b</sup> UGC-DAE Consortium for Scientific Research, Kolkata Centre, III/LB-8 Bidhannagar, Kolkata-700 098, India

<sup>c</sup> Variable Energy Cyclotron Centre, 1/AF- Bidhannagar, Kolkata-700 064, India

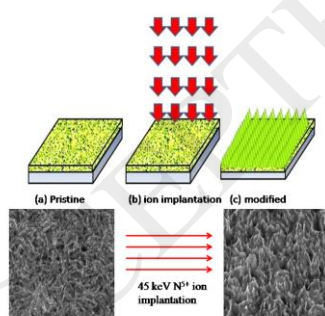
<sup>d</sup> PG & Research Department of Physics, Government Arts College, Ariyalur, Tamil Nadu, India

<sup>e</sup> Crystal Growth Centre, Anna University, Chennai – 600 025, India

\*Corresponding author: Tel.: +91-44-27417835

E-mail address: bakiyaraj.g@ktr.srmuniv.ac.in (G. Bakiyaraj)

Graphical abstract



### Highlights

- 45 keV  $N^{5+}$  ion beam implanted on CdS thin films with different fluences.
- No phase transforms (hexagonal structure) occurred for ion implanted films.
- Optical band gap decreases with increase of implantation fluences.
- Red, Yellow, Green and Band edge emission is discussed in luminescence spectrum.

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