Urea doped crystals formed with potassium-sodium pentaborate ($K_{0.5}Na_{0.5}B5$)

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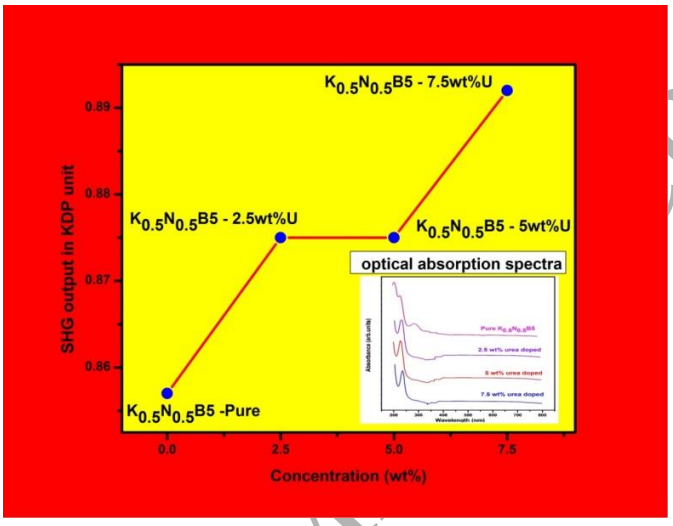
GRAPHICAL ABSTRACT



Highlights:

- Pure and urea added $K_{0.5}Na_{0.5}B5$ (mixed) crystals grown and characterized
- Doping (3 concentrations) effect on the physicochemical properties understood
- Presence of urea molecules in the host crystal matrix confirmed by EDX spectra
- Optical transmittance, window wavelength and SHG efficiency tuned significantly
- Crystal structure undistorted but dielectric parameters changed by urea addition