

FL of Bis 2 Amino Pyridinium Maleate (B2APM) crystals

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Abstract

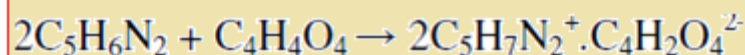
Bis 2 Amino Pyridinium Maleate (B2APM) crystals are NLO in nature and are grown by solution growth method, since NLO materials are widely used for number of variety of applications such as ease of fabricating, high stability and wide range of transparency of light; they are proposed to be grown as the titled specimen. The single XRD data confirms that this crystal is having a as 21.760 Å, b as 23.555 Å, c as 5.626 Å, $\alpha = \beta = \gamma = 90^\circ$ and the crystal is orthorhombic in nature, Fdd2 is the space group of Bis 2 Amino Pyridinium Maleate crystals. Structure is the combination of $2C_5H_7N_2^+ \cdot C_4H_2O_4^-$. The wavelength from fluorescence emission is 403 nm and is in the range of visible spectrum.

Key Words: B2APM, XRD, NLO, FLUORESCENCE SPECTRUM ...

Experimental

The B2APM was prepared by suspend 2-aminopyridine and maleic acid in 2:1 molar ratio in water at 100°C. Crystals of B2APM were acquired by slow evaporation of the solvent at the room temperature.

The reaction mechanism is



FL

The FL emission of B2APM is give as 403 nm which is in Blue FL and energy gap is 3.0789 eV and the FL emission is given in Fig.1.

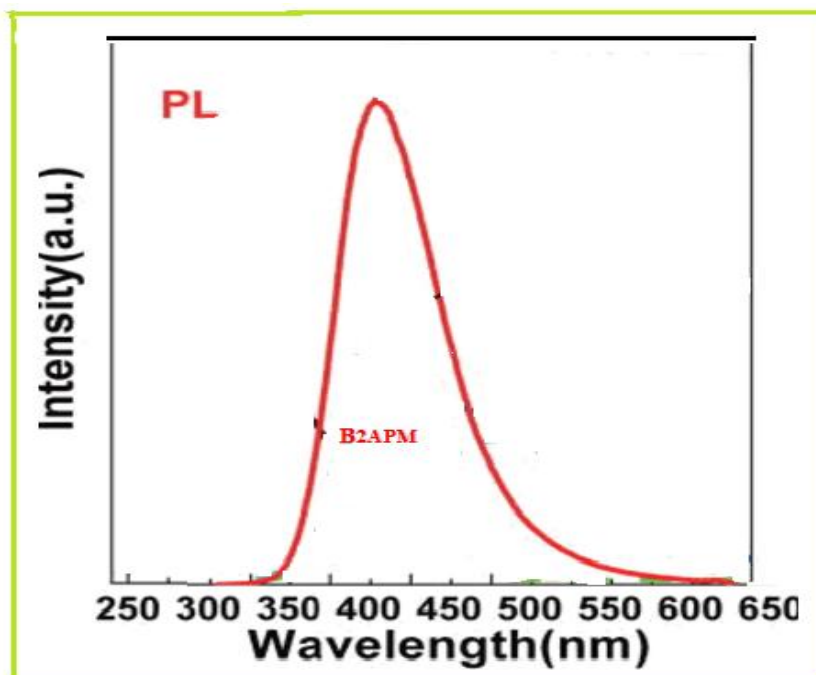


Fig.1 PL Emission for B2APM Material

Conclusion

B2APM crystals are grown by slow evaporation method and here the grown material is subjected to XRD, NLO and FL and from that it is orthorhombic in nature. The single XRD data confirms that this crystal is having a as 21.760 Å, b as 23.555 Å, c as 5.626 Å, $\alpha = \beta = \gamma = 90^\circ$. The FL emission of B2APM is give as 403 nm which is in Blue FL and energy gap is 3.0789 eV, also SHG is higher value than all other maleate crystals.

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