

Comparison of Effect of LDT (CWL & LPL) on Bis 2 Amino Pyridinium Maleate (B2APM) Crystals

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Abstract: Crystals have Anisotropy and Bis 2 Amino Pyridinium Maleate (B2APM) crystals are NLO-SHG in nature and are grown by solution growth method, 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 $2C_5H_7N_2^+ \cdot C_4H_2O_4^{2-}$.

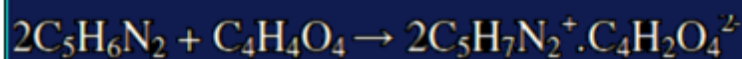
The LDT with Continuous wave and Long Pulse Lasers are effective with fluence, filter and % of LDT are reported.

Keywords: B2APM, XRD, NLO, LDT ...

1. INTRODUCTION

The B2APM was prepared by dangled 2-aminopyridine with maleic acid in 2:1 ratio in water. Crystals of B2APM were acquired by slow evaporation of the solvent at the room temperature.

The reaction mechanism is



2. LDT

Laser damage threshold data for B2APM are studied and given as comparative report for them using continuous wave and Long Pulse Lasers and given in Table.1.

Table1. Laser damage threshold data for B2APM using continuous wave and Long Pulse Lasers

Types	LDT I	LDT II
Family	Laser Mux	Max line
Laser	Cw	Lp
Wavelength nm	1064	1064
Power/Energy	2kW	2mJ
Beam diameter	20mm	20mm
Pulse width	10ns	10ns
Fluence in W/cm ²	636.62	0.1
Filter in W/cm ²	20000	0.2
% of LDT evaluation	3.18	0.32
LDT effect	Damage not possible	Damage not possible

3. CONCLUSION

B2APM crystals are grown by slow evaporation method and here the grown material is subjected to XRD, LDT and from that it imports that the crystal 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, $\alpha = \beta = \gamma = 90^\circ$. LDT for continuous wave and Long Pulse Lasers of B2APM refer that the material is 3.18 and 0.32 % and not probable proviso for damage with these limits.

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