



## Journal of Applicable Chemistry

2018, 7 (4): 1033-1039

(International Peer Reviewed Journal)



### Studies on Thermal and Spectroscopic Properties of Magnesium Doped Single Crystal

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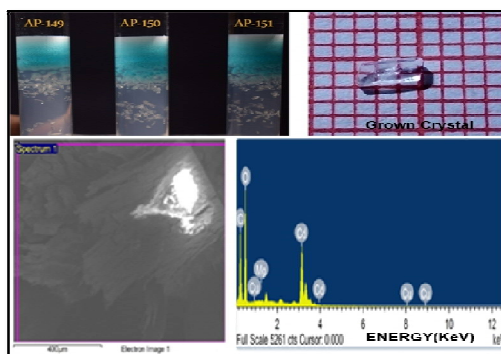
Accepted on 25<sup>th</sup> June, 2018

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#### ABSTRACT

*Solid state spectroscopy provides important information about solids, particularly on their band structures. Lot of work has been done in the recent years on the study of behavior of impurity particles in crystals with respect to their influence on lattice structure and optical absorption. Magnesium ( $Mg^{2+}$ ) Doped Copper Cadmium Oxalate (MDCCO) single crystals were grown by single diffusion reaction method using silica gel at ambient conditions. Thermo Gravimetric Analysis /Differential thermal analysis (TGA/DTA).UV- Visible absorption and transmittance spectra of the grown crystals were obtained. The results were discussed and reported.*

#### Graphical Abstract



**Keywords:** Impurity, Magnesium, MDCCO, TGA/DTA

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