

## **Inventive Synthesis and Characterization of a Cesium Molybdate Compound: CsBi(MoO<sub>4</sub>)<sub>2</sub>**

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**Abstract :** Cesium molybdates with general formula CsMIII(MoO<sub>4</sub>)<sub>2</sub>, where MIII = Bi, Dy, Pr, Er, exhibit rich polymorphism, and crystallize in a layered structure. These properties cause intensive studies on cesium molybdates. CsBi(MoO<sub>4</sub>)<sub>2</sub> was synthesized by microwave method by using cerium sulphate, bismuth oxide and molybdenum (VI) oxide in an appropriate molar ratio. Characterizations were done by x-ray diffraction (XRD), fourier transform infrared (FTIR) spectroscopy, scanning electron microscopy/energy dispersive analyze (SEM/EDS), thermo gravimetric/differential thermal analysis (TG/DTA).

**Keywords :** cesium bismuth dimolybdate, microwave synthesis, powder x-ray diffraction, rare earth dimolybdates

**Conference Title :** ICMSME 2015 : International Conference on Material Science and Material Engineering

**Conference Location :** Istanbul, Türkiye

**Conference Dates :** September 28-29, 2015