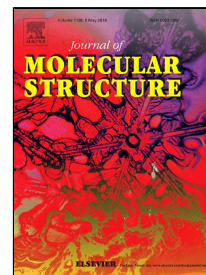


# Accepted Manuscript

Hydrothermal Synthesis, Crystal Structure, Luminescent and Magnetic Properties of a New Mononuclear Gd<sup>III</sup> Coordination Complex



Mustafa Burak COBAN

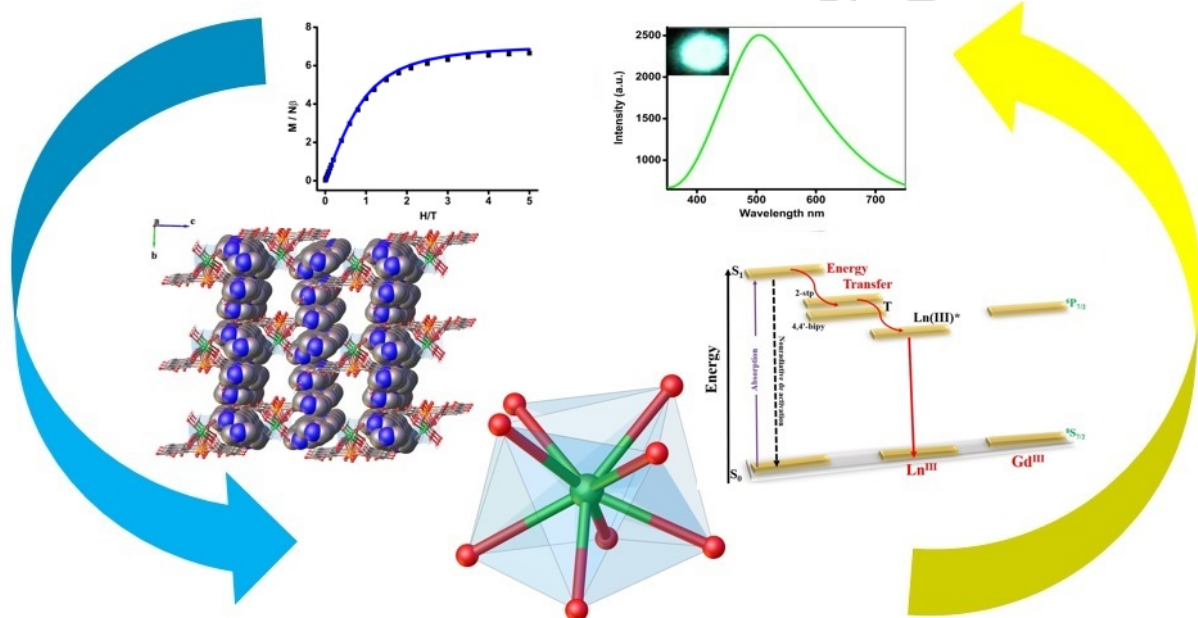
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## Graphical Abstract

A new lanthanide-based coordination complex,  $\{[\text{Gd}(\text{2-stp})_2(\text{H}_2\text{O})_6] \cdot 2(4,4'\text{-bipy}) \cdot 4(\text{H}_2\text{O})\}$ , complex **1** [2-stp=2-sulfoterephthalate and 4,4'-bipy=4,4'-bipyridine] has been synthesized and structurally characterized. The solid-state photoluminescence measurements exhibit only a green light broad band emission belonging to the ligands and has any no-metal-centered luminescence. Meanwhile, Variable-temperature magnetic susceptibility and isothermal magnetization as function of external magnetic field for complex **1** is studied which reveal mainly the presence of antiferromagnetic interaction.



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