

*Title:* Preparation of a 1,2-*bis*-azo tetradentate ligand and study of its complexation with lanthanides

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Single molecule magnets (SMMs) are molecules that can retain the magnetization upon removal of an applied field, making each molecule behave like a small magnet. This property makes them ideal candidates for technological applications in information storage.

In this work we tried to synthesize a 1,2-*bis*-azo ligand from a coupling reaction in a non-acidic medium.

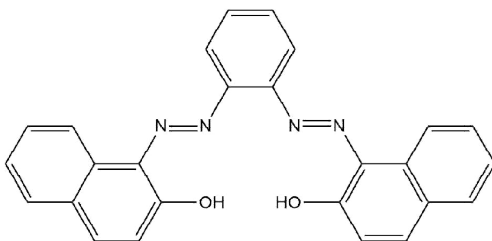


Figure 1: 1,2-*bis*-azo compound

This ligand should be able to coordinate with lanthanide cations to obtain new SMMs.

In addition, it is likely that the coordinating character of this ligand could be modulated by light through the isomerization process of the azo group.

**Keywords:** single molecule magnets, magnetization, organic synthesis, azo group.