

## Desing-ul unor noi liganzi de tip antenă pentru obținerea de materiale luminescente ale lantanidelor

**PN-III-P1-1.1-TE-2019-1345 (TE 109)**

**Financial support: UEFISCDI**

**Project team:**

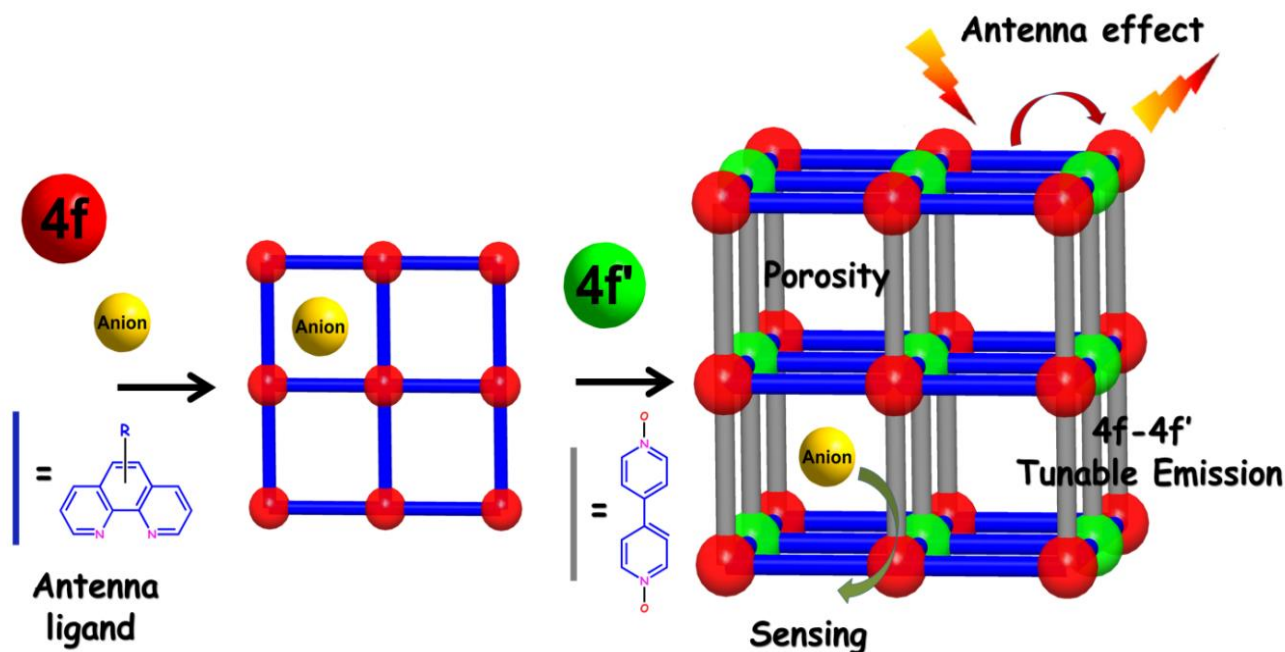
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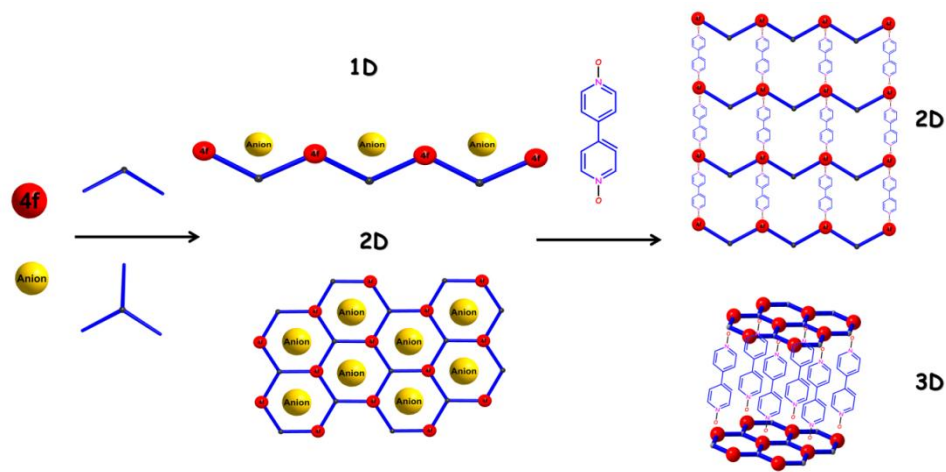
# Abstract:

The present project will focus on the synthesis and characterization of new lanthanide metal-organic frameworks for luminescent sensing and light-emitting applications. The molecular systems are based on pre-formed lanthanide-phenanthroline derivatives precursors and organic spacers or lanthanide metalloligands using the molecular approach. This strategy relies on the acting of phenanthroline derivatives as C3 ligands and will be used for the first time in lanthanide chemistry.



# Objectives:

- A. *Design, synthesis and characterization of new organic phenanthroline based ligands ( $C_2$  or  $C_3$  type).*
- B. *Design, synthesis and characterization of new homometallic 4f complexes to be further used as nodes.*
- C. *Investigation of the luminescent properties of the complexes; exploration of the sensing abilities of the functionalized phenanthroline based ligands towards various lanthanide ions.*
- D. *Design, synthesis and characterization of new lanthanide metal-organic frameworks containing phenanthroline based ligands. To the best of our knowledge, this synthetic approach has not been investigated so far.*



Results 2020:

