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Piano Nazionale di Ripresa e Resilienza
Missione 4 - Componente 2 - Investimento 1.1
«Progetti di Ricerca di Rilevante Interesse Nazionale»

Title of the project

Exploring Spin Dynamics of Earth Abundant Transition Metal Ion Complexes as MRI Diagnostic Probes - STARS

Scientific Investigator

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Abstract

STARS is a curiosity-driven project aiming to develop safer, Gd-free MRI contrast agents based on Cu(II) and V(IV), which are abundant and biologically tolerated. By combining advanced magnetic resonance techniques and computational modeling, the project will investigate spin dynamics and relaxivity mechanisms. STARS also explores redox-switchable behavior to design responsive imaging agents. The results will support more sustainable and accurate diagnostic technologies in healthcare.



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