INMA
INSTITUTO DE NANOCIENCIA Y MATERIALES DE ARAGÓN

EXCELENCIA SEVERO OCHOA
04/2024 - 03/2030

MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

AGENCIA ESTATAL DE INVESTIGACIÓN

PID2025-172997OB-I00

FPI PREDOCTORAL FELLOWSHIP (4 years contract)

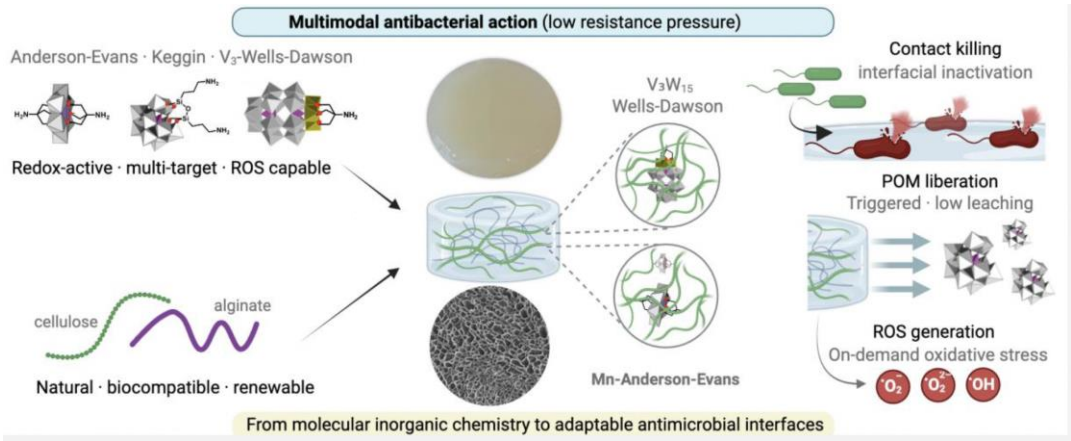
Adaptive antimicrobial POM–biopolymer materials

THE PROJECT

APOLLO develops adaptive polyoxometalate (POM)–biopolymer hydrogels and aerogels as next-generation antimicrobial materials. The project combines redox-active POM clusters with sustainable biopolymers such as nanocellulose, alginate and pullulan, using dynamic chemical crosslinking to control POM retention, release and antimicrobial activity.

RESEARCH FOCUS

- POM & hybrid-material synthesis
- Hydrogel / aerogel fabrication
- Antimicrobial and antibiofilm assessment
- Structure–function relationships & ROS activity



CANDIDATE PROFILE

ESSENTIAL

- Master Degree in Chemistry, Materials Chemistry or related
- Practical experience in synthetic chemistry
- Interest in interdisciplinary chemistry–materials–microbiology

DESIRABLE / BONUS

- Synthesis and characterisation of hybrid nanomaterials
- Antimicrobial or antibiofilm assessment
- Experience with POMs, polymers or soft materials

APPLICATIONS

Contact as soon as possible the project PIs below with your CV, cover letter and transcripts of your Bachelor and Master degrees.

Estimated official call opening in December 2026 or January 2027. Starting first quarter 2027

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