

Experiment Proposal

Experiment number GP2023006

Principal investigator (*)	Dr Francesca Visentin, CNR, ITALY	
Co-investigator	Dr Naida El Habra, National Council of Research, ITALY	
Co-investigator	Dr Alessia Famengo, CNR, ITALY	
Co-investigator		
Experiment title	Chemical characterization of Hydrogen Permeation Barrier coatings	
Training MRF	Raman Confocal Microscope	Days requested: 4
Access Route	Direct Access	Previous GP Number: no
Science Areas	Materials	DOI: -
Sponsored Grant	Yes	Sponsor: Other
Grant Title	RICERCA E SVILUPPO DI TECNOLOGIE PER LA FILIERA DELLIDROGENO	Grant Number: -
Start Date	01/06/2022	Finish Date: 31/12/2025
Similar Submission?	-	
Industrial Links	-	
Non-Technical Abstract	<p>ICMATE research activity deals with the development of oxide coatings employing Metal Organic Chemical Vapor Deposition technique. Among various materials, alumina is a promising barrier material because of its low hydrogen permeability, high thermal and chemical stability and hardness. In this study, Al₂O₃/TiO₂ composite multilayer films will be deposited by MOCVD and tested for H₂ permeation after a deep compositional, structural, and morphological characterization. Increasing our knowledge of the Raman technique could allow a better understanding of the deposited multilayer coatings, thanks to the determination of their chemical composition and distribution, the evaluation of amorphous/crystalline forms and</p>	

Publications

ISIS neutron and muon source
IM@IT E-platform: No

Instruments
Days Requested:
Access Route
Previous RB Number:
Science Areas
DOI:
Sponsored Grant
Sponsor:
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Sample record sheet

Principal contact Dr Francesca Visentin, CNR, ITALY

Training Instrument Raman Confocal Microscope

Days Requested: 4

Special requirements:

SAMPLE

Material	-	-	-
Formula	-	-	-
Forms			
Volume			
Weight			
Container or substrate	-	-	-
Storage Requirements	-	-	-

SAMPLE ENVIROMENT

Temperature Range	-	-	-
Pressure Range	-	-	-
Magnetic field range	-	-	-
Standard equipment	-	-	-
Special equipment	-	-	-

SAFETY

Prep lab needed	-	-	-
Sample Prep Hazards	-	-	-
Special equip. reqs	-	-	-
Sensitivity to air	-	-	-
Sensitivity to vapour	-	-	-
Experiment Hazards	-	-	-
Equipment Hazards	-	-	-
Biological hazards	-	-	-
Radioactive Hazards	-	-	-
Additional Hazards	-	-	-
Additional Details	-	-	-
Sample will be	-	-	-

