

# VÁCUO 2022

## Workshop





**November 25, 2022**

Aniteatro do Departamento de Física  
Universidade de Aveiro

The **VÁCUO 2022 Workshop** aims to bring together Portugal-based scientists in an intimate meeting that promotes discussion on deposition methods, materials synthesis and characterization techniques using vacuum technologies. The 2022 edition will be held on Friday November 25 between 2-6 pm at the Physics Department of the University of Aveiro. The topics of the Workshop will focus on functional coatings for the industry and maritime applications, tribology, thermoelectrics, biosensors, solar cells and nanostructured surfaces.

### Programme:





14:00–14:05 **Foreword:** Carlos Tavares, *SOPORVAC*

	14:05-14:20 <b>Quantitative evaluation of carbon hybridized states in hard DLC films deposited by HiPIMS-DOMS.</b> <i>João Carlos Oliveira</i> CEMMPRE, Department of Mechanical Engineering, University of Coimbra
	14:20–14:35 <b>Development of transparent TiO<sub>2</sub>:Nb thin films for thermoelectric modules</b> <i>Joana M. Ribeiro</i> Centre of Physics, University of Minho
	14:35-14:50 <b>Graphene-DNA origami-based Nano-electro-mechanical System</b> <i>João Azevedo</i> INL - International Iberian Nanotechnology Laboratory, Braga
	14:50-15:05 <b>Upscaling the Thickness of Metallic Coating on Polymer Surface</b> <i>Filipa Ponte</i> CEMMPRE, Department of Mechanical Engineering, University of Coimbra

	<p>15:05-15:20</p> <p><b>Application of laser technology for cleaning the coating on molds in the plastics industry</b></p> <p><i>Rodrigo Santos</i> i3N &amp; DFIS, Universidade de Aveiro</p>
	<p>15:20-15:35</p> <p><b>Coatings on cork and rubber – protection from UV radiation and mechanical wear</b></p> <p><i>Belgacem Tiss</i> Centre of Physics, University of Minho</p>

**COFFEE BREAK**

15:35-16:00

	<p>16:00-16:15</p> <p><b>Upscaling of self-lubricating W-S-C coatings deposited by magnetron sputtering</b></p> <p><i>Albano Cavaleiro</i> CEMMPRE, Department of Mechanical Engineering, University of Coimbra</p>
	<p>16:15-16:30</p> <p><b>Nanofabrication at the Service of New Solar Cell Technologies</b></p> <p><i>Jennifer Teixeira</i> INL - International Iberian Nanotechnology Laboratory, Braga</p>
	<p>16:30-16:45</p> <p><b>Thermal Stability of DLC Coatings Produced by HiPIMS-DOMS in Ar-Ne Discharges</b></p> <p><i>Alireza Vahidi</i> CEMMPRE, Department of Mechanical Engineering, University of Coimbra</p>
	<p>16:45-17:00</p> <p><b>Extração térmica de 2,4,6-tricloroanisol (TCA) da cortiça</b></p> <p><i>Susana Monteiro</i> CEFITEC, Departamento de Física da Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa</p>



17:00-17:15

**Multifunctional coatings for maritime applications**

*José David Castro*

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