

**MASTER UNIVERSITARIO EN: ENERGÍA Y COMBUSTIBLES PARA EL FUTURO**

(Marcar la opción que proceda)

- SEMINARIO DE INVESTIGACIÓN** con financiación obtenida en la Convocatoria de Ayudas UAM de Movilidad para estos seminarios.
- SEMINARIO DE INVESTIGACIÓN** con financiación asignada al Máster Oficial en la partida presupuestaria del ejercicio en curso.
- OTROS SEMINARIOS**

**NOTA:** Este Anexo ha de remitirse a [posgrado.oficial@uam.es](mailto:posgrado.oficial@uam.es)

La no cumplimentación exhaustiva de alguno de estos datos supondrá la devolución al remitente.

**ANEXO B : Información para la difusión del seminario<sup>1</sup>**

**Título:** Development of TiFe intermetallics for large-scale stationary hydrogen storage in the framework of the European project HyCARE

**Ponente:** F. Cuevas

**Fecha/Hora:** Martes 28 de Abril de 2020 a las 11.30 horas

**Facultad/Escuela:** Facultad de Ciencias

**Aula/Modulo:** Microsoft Teams

**Contenido del seminario**
**Ámbito:**

Programa de Doctorado en: Energías y combustibles para el futuro (RD1393/2007)/Física de la Luz Y la Materia (RD2011)/Materiales avanzados y nanotecnología

Línea/Tema de investigación: Hidrógeno. Producción, acumulación y uso

**Breve resumen (max. 150 palabras):**

The intermittency of renewable sources requires the use of storage systems to equilibrate energy production and demand. The European project HyCARE ([www.hycare-project.eu/](http://www.hycare-project.eu/)), running from 2019 to 2021, aims to demonstrate the efficient use of metal hydrides, coupled with phase change materials, to store 50 kg of hydrogen, one of the highest quantity ever handled in Europe by solid-state hydrogen storage. Among the 10 partners of the HyCARE consortium, ICMPE (CNRS) leads the alloy tailoring. It includes alloy design, tuning to thermodynamic operational conditions, activation and kinetic issues, as well as cycling stability, resistance to impurities and limited use of raw critical materials. Low-cost TiFe-compounds have been selected. Composition and microstructure are optimized in terms of thermodynamics, activation, kinetics and cycle-life. Mn and Cu substituted TiFe-compounds have been developed and their hydrogen properties deeply characterized by many-fold techniques, including in-situ neutron diffraction.

**Ponente: Breve resumen del CV (max. 200 palabras)**

**Fermín Cuevas** obtained his PhD in Physics at *UAM University of Madrid* in 1996. After three-postdoctoral stages at *MPI Metals Research* (Germany), *UAM* (Spain) and *CNRS/ICMPE* (France), he became in 2002 permanent CNRS researcher. In 2007, he obtained his Habilitation as PhD supervisor from *Paris XII University*. His research focuses in hydrogen storage in solids and electrode materials for Ni-MH as well as Li-ion batteries. He has published over 140 articles in peer-reviewed international journals, H-index 30. He is currently leader of the Hydrogen-Matter Interaction group at ICMPE and co-Head of the Hydrogen Storage axis at the CNRS French Research network on Hydrogen energy.

<sup>1</sup> La información sobre el seminario no debe superar una página