Hydrogen-based technologies at ICSI Rm. Valcea Dr. ing. Ioan Iordache

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Iordache Ioan
National Research and Development Institute for Cryogenic and Isotopic Technologies ICIT, Rm. Valcea
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Hydrogen-based technologies at ICSI Rm. Valcea

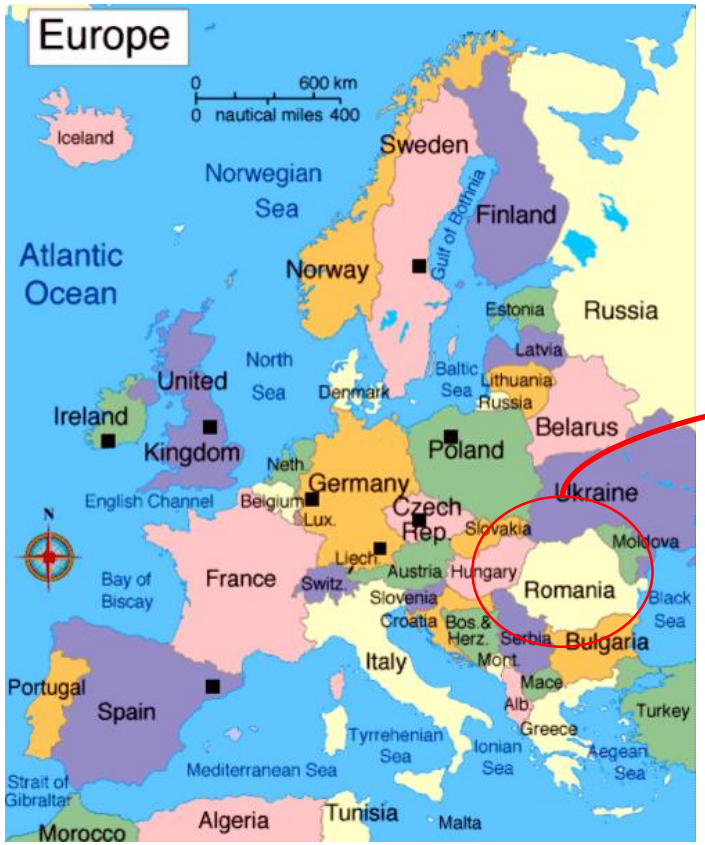
Dr. ing. Ioan Iordache

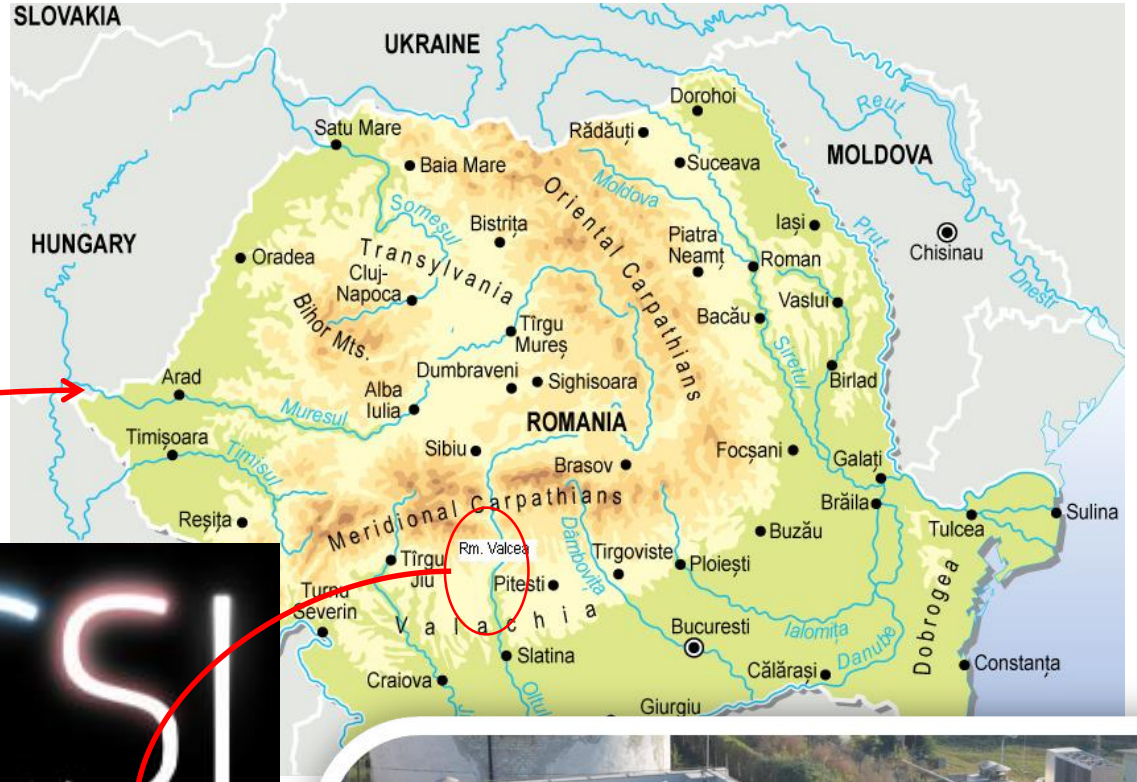
National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Romania

ICSI Rm. Valcea was founded in 1970 as an industrial pilot plant.

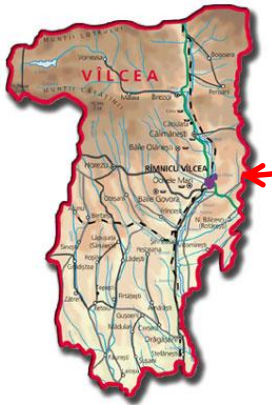
Among the main components of ICSI's mission, the following can be mentioned:

- supporting the nuclear energy through Research-Development and Innovation activities,
- study of topics related to environmental protection and food security, and
- development and implementation of hydrogen-based technologies and sources of renewable energies.





ICSI



RM. VALCEA (city)

ICSI - an organization on Three Pillars + Business

ICSI NUCLEAR

To develop research in the field of nuclear fission, nuclear fusion, isotopic exchange and cryogenic distillation

ICSI ENERGY

To develop and implement hydrogen-based technologies and renewable energy sources

ICSI ANALYTICS

To implement appropriate analytical methods and markers for environmental protection and food security

ICSI Business

valorization of research:

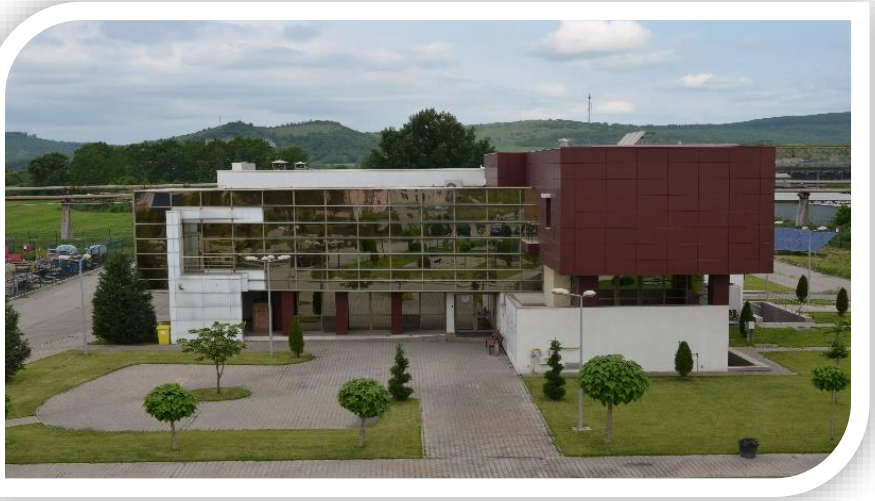
- **know-how,**
- **products,**
- **technologies,**
- **methods,**
- **services,**

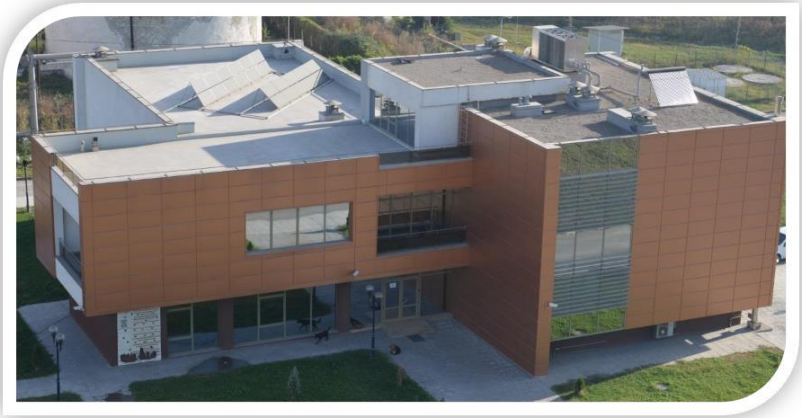
…

in order to increase their economic competitiveness.

ICSI Energy – on the Road Towards Hydrogen economy

- Working with hydrogen since the 90s
- **National Center for Hydrogen and Fuel Cell** – 2009
- **Low Temperature Laboratory for energy support** – 2012
- **ROM**anian **E**nergy **ST**orage Laboratory - 2015

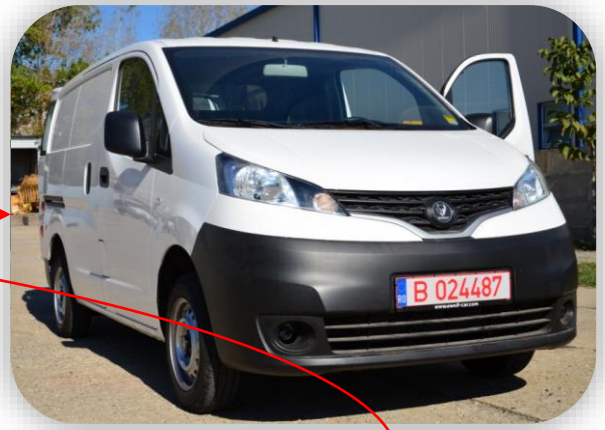


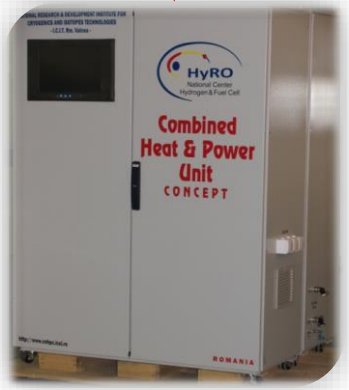


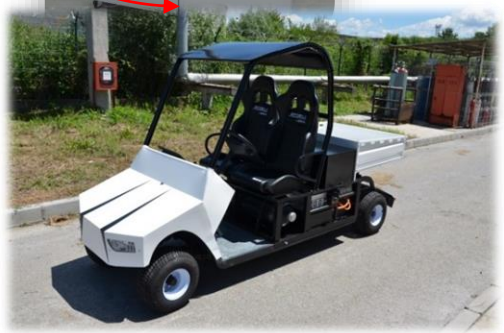
Objectives:

- Promote excellence in fundamental and applied research
- Provide support for development of applied technologies and models
- Advice and support for authorities regarding RES and hydrogen
- Support in training activities for students and young researchers

In Romania there are approximately 50 public universities and a little more than 50 research institutes. However, only 10 - 15 of them are involved constantly in the field of hydrogen and fuel cell.







Project Number	Project Acronym	Call year
303417	HyUnder	2011
735977	HyLAW	2016
779730	TeacHy	2018

FCH JU projects

HyUnder

HyLAW

TeacHy

HyUnder, Assessment of the potential, the actors and relevant business cases for large scale and seasonal storage of renewable electricity by hydrogen underground storage in Europe

HyLAW, Identification of legal rules and administrative processes applicable to Fuel Cell and Hydrogen technologies' deployment, identification of legal barriers and advocacy towards their removal.

Partners

TeacHy - Teaching Fuel Cell and Hydrogen Science and Engineering Across Europe within Horizon 2020

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