Carcadea Elena
Manager of ICSI Energy Department, ICSI Rm. Valcea, Romania

Dr. Elena Carcadea has been the Manager of the ICSI Energy Department (formerly the National Centre for Hydrogen and Fuel Cells), a department within the National Research & Development Institute for Cryogenic and Isotopic Technologies (ICSI Râmnicu Vâlcea), since 2017.
She joined ICSI nearly 29 years ago and, over the last 20 years, has been actively involved in research on hydrogen and proton exchange membrane (PEM) fuel cell technologies. She earned her Ph.D. in Applied Mathematics in 2008 with the thesis "Modeling of Fluid Dynamics in Porous Media. Mathematical Application to Fuel Cell Modeling." Since then, her work has focused on optimizing hydrogen technologies and electrochemical energy conversion and storage devices, including fuel cells, electrolyzers, and batteries, combining theoretical understanding, mathematical modeling, and experimental validation to improve their performance, reliability, and scalability.
Dr. Carcadea has coordinated numerous national and international research projects in the field of hydrogen and sustainable energy systems and has played a key role in developing Romania's research infrastructure and strategic initiatives for the hydrogen economy. She served as an expert in the development of Romania's National Hydrogen Strategy and Action Plan and contributed to the Strategic Research and Innovation Agenda on Green Hydrogen.
Her scientific activity has resulted in an extensive portfolio of publications in high-impact international journals, several books and book chapters, as well as multiple patents and patent applications in hydrogen and fuel cell technologies. She is actively involved in the European hydrogen community as the representative of ICSI in Hydrogen Europe Research and the European Clean Hydrogen Alliance. She is also a founding member of the Romanian Association for Hydrogen Energy.