FINAL CONCLUSIONS AND RECOMMENDATIONS

In this volume IV, researchers in energy have developed innovative methods for renewable and clean energy, in particular, in electrolyzers for the generation of hydrogen from water, a reaction known as water splitting or oxidation with the topics "Incorporation of Fe -F6 blocks into laminar hydroxides of Fe, Ni: exploring on the water oxidation reaction"; "Photocatalytic generation of hydrogen using titanium and bismuth oxide catalysts". Other topics for the development of solid fuel cells; "Evaluation of the partial substitution of the lanthanum A-site in ABO_3-type perovskites: structural and properties for solid-state fuel cells applications"; Or the use of by-products of biodiesel production "Glycerol electrooxidation for energy conversion using metal nanoparticles."

In the area of health, research is focused on the study of breast cancer with two investigations "Nanostructured lipid carriers for cancer treatment: effect of process parameters on particle size and polydispersity index using experimental design" and "Design of nanomaterials toward the contrast enhancement in mammography images for breast cancer diagnosis". Other investigations "Thermal study of nanocomposites for medical applications" and "Numerical simulation of a PDMS microfluidic channel compatible with biosensors", contribute to new medical devices to use as future tools.

Research in food seeks conservation through coating with nanostructured films and incorporating natural compounds that can improve conservation. They are also investigating the incorporation of nutrients in nanocapsules or nanofibers, which can later be administered in daily intakes.

The development of new materials such as "Reliability of flexible amorphous In-Ga-Zn-O (a-IGZO) thin-film transistors" and Superhydrophobic Nanocoating and Their Mechanical Stability for Buildings Materials Application, carry out research for applications in new areas, depending on of the entrepreneurial demands will be successful.

Readers and researchers in nanosciences will find in this volume IV of advances in micro nanosciences and nanotechnology of the RNMN network of the IPN, innovative and original research that covers most areas of knowledge, seeking to meet the needs of society (LA TÉCNICA AL SERVICIO DE LA PATRIA).