

August 31, 2015

Japan Science and Technology Agency (JST)  
5-3, Yonbancho, Chiyoda-ku, Tokyo 102-8666

## JST to fund 5 coordinated Visegrad Group (V4)–Japan research projects within the “FY2015 Strategic International Collaborative Research Program (SICORP)”

On 31 August 2015, the Japan Science and Technology Agency (JST) announced that they would commence support for 5 coordinated projects on the topic of “Advanced Materials”. This support, within the framework of the [Visegrad Group \(V4\)–Japan<sup>\\*1\)</sup>](#) Joint Research Program, will be implemented as an activity of JST’s FY2015 [Strategic International Collaborative Research Program \(SICORP\)<sup>\\*2\)</sup>](#).

The selected projects are as follows:

- (1) “New Generation of InGaN Layers, Quantum Wells and Wires Grown on Vicinal GaN Substrates for Optoelectronics and Photovoltaics”  
Poland: Mike Leszczynski, Head of Epitaxy Lab, Polish Academy of Sciences  
Japan: Hiroshi Amano, Professor, Nagoya University  
Czech: Holy Vaclav, Professor, Charles University in Prague

The goal of this research project is to develop a new generation of InGaN layers, quantum wells and wires which will have smaller defect density than the present state-of-the-art. This will be achieved by control of In-segregation and mismatch defect formation.

- (2) “Nanophotonics with Metal – Group-IV–Semiconductor Nanocomposites: from Single Nanoobjects to Functional Ensembles”  
Czech: Jan Valenta, Professor, Charles University in Prague  
Japan: Minoru Fujii, Professor, Kobe University  
Hungary: Ádám Gali, Research adviser, Research group leader, Hungarian Academy of Sciences  
Slovakia: Ivan Štich, Chief scientist, Slovak Academy of Sciences  
Poland: Romuald Bartłomiej Beck, Professor, Warsaw University of Technology

The aim of this project is to develop new functional composite materials consisting of silicon nanocrystals and metal nanostructures. The goal is to demonstrate the potential of these materials in electronic devices and in

biological applications.

(3) “Structure–Function Relationship of Advanced Nanooxides for Energy Storage Devices”

Japan: Hisao Suzuki, Professor, Shizuoka University

Slovakia: Vladimír Šepelák, Professor, Slovak Academy of Sciences

Czech: Ladislav Kavan, Professor, J. Heyrovsky Institute of Physical Chemistry

Poland: Dariusz Oleszak, Associate Professor, Warsaw University of Technology

This project aims at developing advanced all–solid type secondary batteries by investigating the relationship among powder properties, nanostructures of sintered ceramics and thin films, and their electrochemical properties.

(4) “Highly Safe GaN Metal–Oxide–Semiconductor Transistor Switch”

Slovakia: Jan Kuzmik, Head of Department, Slovak Academy of Sciences

Japan: Tamotsu Hashizume, Professor, Hokkaido University

Poland: Boguslawa Adamowicz, Associate Professor, Silesian University of Technology

Hungary: Lajos Tóth, Senior Research Fellow, Hungarian Academy of Sciences

The aim of this research project is to realize GaN MOS high electron mobility transistors with high operation stability for next–generation power inverter systems.

(5) “Multi Scale Model of the Laser Dieless Drawing Process of Tubes from Hardly Deformable Magnesium Alloys”

Poland: Andrij Milenin, Professor, AGH University of Science and Technology

Japan: Tsuyoshi Furushima, Assistant Professor, Tokyo Metropolitan University

Czech: Jiří Němeček, Associate Professor, Czech Technical University in Prague

This project aims to develop a multi–scale model of the laser dieless drawing process for hardly deformable magnesium alloys, and to fabricate magnesium alloy small tubes with high strength and ductility for applying to light weight structures in automobile and bioabsorbable materials.

A total of 56 proposals were submitted in response to the joint call for proposals implemented by JST, MEYS, NKFIH, NCBR and IVF, which was closed on April 10, 2015. Based on the results of evaluation conducted by experts from third countries, the Scientific Committee comprising 6 senior researchers nominated by the participating organizations made their recommendation to the Funding Organizations Meeting, according to defined assessment criteria. In the Funding Organizations Meeting, the participating organizations discussed the scientific recommendation in depth and jointly decided on the 5 successful projects to select for funding.

Support for the projects will continue for about three years.

\*1) Participating Organizations:

Japan: Japan Science and Technology Agency (JST)

Czech: Ministry of Education, Youth and Sports of the Czech Republic (MEYS)

Hungary: National Office for Research, Development, and Innovation (NKFIH)

Poland: National Center for Research and Development of Poland (NCBR)

Slovakia: Slovak Academy of Sciences (SAS)

V4: International Visegrad Fund (IVF)

\*2) Strategic International Collaborative Research Program(SICORP):

SICORP is a “top-down type” program that provides support to international research projects with countries and regions, in fields of cooperation designated by the Ministry of Education, Culture, Sports, and Science and Technology(MEXT) on the basis of intergovernmental agreements.

For more details, please visit the SICORP homepage:

<http://www.jst.go.jp/inter/english/sicorp/index.html>

## Appendices

Appendix 1: [V4-Japan Collaborative Research Projects](#)

Appendix 2: [Scientific Committee Members](#)

Reference : [Overview of the Evaluation](#)

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