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RPPR Final Report

as of 27-Dec-2018

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Report Date: 31-Oct-2017

Date Received: 20-Dec-2018

Final Report for Period Beginning 01-Feb-2017 and Ending 31-Jul-2017

Title: International Symposium on Sustainable Ionic Liquid and Aluminum Extraction and Processing

Begin Performance Period: 01-Feb-2017

End Performance Period: 31-Jul-2017

Report Term: 0-Other

Submitted By: Marcelle Gaune-Escard

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Distribution Statement: 1-Approved for public release; distribution is unlimited.

STEM Degrees:

STEM Participants:

Major Goals: The scientific objective of this symposium was to cover scientific, technological and process engineering of high temperature materials processing, such as raw materials, ironmaking, energy, environment and recycling, kinetic or dynamic modeling and relating materials synthesis in metallurgical industries. The presentations and round table discussions focused on the Principles, Technologies and Industrial Practice of: aluminum extraction processes; magnesium extraction processes; molten salt chemistry and thermodynamics; spectroscopy (visible, infrared and raman) of molten salts and gases; transport properties of newtonian liquids; carbon technology; electro winning of magnesium; electro winning of aluminium; silicon for the chemical and solar industry; and ionic liquids electrochemistry and thermodynamics.

Through a Summit Gala that involved Nobel Prize winners, politicians reflecting on the importance of political framework, CEOs of big industrial companies reflecting on the role of applied technology and management, well?known academics reflecting on the role of education for an engaged society, and research institutes reflecting on the role of base technologies, participants renewed their knowledge and perspectives on science and sustainable development.

Accomplishments: Overall, this symposia had 65 technical presentations and papers submitted by nearly 100 authors and co?authors. Prof. Shechtman presented two special lectures. One on role of science and the other one on the important scientific entrepreneurship and its challenges. He emphasized the importance of innovation and entrepreneurship in advancing a sustainable society for both developing and developed countries. SIPS 2016 had an Opening Event, three Summit Plenary sessions, a Summit Gala that involved Nobel Prize winners, politicians reflecting the importance of political framework, CEOs of big industrial companies reflecting the role of applied technology and management, well?known academics reflecting the role of education for an engaged society, and research institutes reflecting the role of base technologies.

Training Opportunities: The presentations during this conference furthered education by providing exposure to the pioneers of important scientific and engineering fields, and their latest scientific achievements.

Results Dissemination: A final report and summary of events was distributed and is available publicly on the website. Efforts were made to publicize the honorees and award winners in press releases and external websites. The proceedings were published and articles are available on Google Scholar.

RPPR Final Report as of 27-Dec-2018

Honors and Awards: Fray International Sustainability Award (Corporations) - Prof. Ruggero Santilli, Thunder Energies Corporation, USA

Fray International Sustainability Award (Corporations) - John Starkey, Starkey & Associates Inc., Canada

Fray International Sustainability Award (Academia) - Prof. Jose Carlos D'Abreu, PUC-RIO, Brazil

Fray International Sustainability Award (Academia) - Prof. Jean-Marie Dubois, CNRS, France

Fray International Sustainability Award (Academia) - Prof. Harald Arnljot Oye, NTNU, Norway

Fray International Sustainability Award (Academia) - Prof. Jun-Ichiro Yagi, Tohoku University, Japan

Protocol Activity Status:

Technology Transfer: Nothing to Report

PARTICIPANTS:

Participant Type: PD/PI

Participant: Marcelle Gaune-Escard

Person Months Worked: 12.00

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Project Contribution:

International Collaboration:

International Travel:

National Academy Member: N

Other Collaborators:

Participant Type: Other Professional

Participant: Angela Robert

Person Months Worked: 12.00

Funding Support:

Project Contribution:

International Collaboration:

International Travel:

National Academy Member: N

Other Collaborators:

Participant Type: Other Professional

Participant: Claude Tetom

Person Months Worked: 12.00

Funding Support:

Project Contribution:

International Collaboration:

International Travel:

National Academy Member: N

Other Collaborators:

Participant Type: Other Professional

Participant: Perla Basho

Person Months Worked: 12.00

Funding Support:

Project Contribution:

International Collaboration:

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National Academy Member: N

Other Collaborators:

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as of 27-Dec-2018

WEBSITES:

URL: <http://www.flogen.org/books/index.php>

Date Received: 20-Dec-2018

Title: SIPS 2016 CD Proceedings

Description: Web link to SIPS 2016 Proceedings available for purchase. It is provided for free to attendees of SIPS 2016.

Flogen Stars Outreach Project:

"International Symposium on Sustainable Ionic Liquid and Aluminum Extraction and Processing", Professor Marcelle Gaune-Escard, Principal Investigator

2016 Report to ONR

10 August 2017

The **International Symposium on Sustainable Ionic Liquid and Aluminum Extraction and Processing** was held as a part of SIPS 2016 – Sustainable Industrial Processing Summit & Exhibition in Hainan Island, China from 6-9 November 2016 at the Yalong Bay Marriott Resort and Spa. Overall, this symposia had 65 technical presentations and papers submitted by nearly 100 authors and co-authors.

The Navy fund of 5000 USD covered the travel and accommodation expenses of Prof. Dan Shechtman, 2011 Nobel Laureate in Chemistry. The funds, as per the original budget approved by ONR was allocated as follows: 4200 USD for airfare from Haifa, Israel to Sanya, China, and 800 USD for hotel/accommodation expenses in Sanya.

Prof. Shechtman presented two special lectures. One on role of science and the other one on the important scientific entrepreneurship and its challenges. He emphasized the importance of innovation and entrepreneurship in advancing a sustainable society for both developing and developed countries.

SIPS 2016 had an Opening Event, three Summit Plenary sessions, a Summit Gala that involved Nobel Prize winners, politicians reflecting the importance of political framework, CEOs of big industrial companies reflecting the role of applied technology and management, well-known academics reflecting the role of education for an engaged society, and research institutes reflecting the role of base technologies.

The summit had a strong number of technical and thematic symposia with special emphasis on the sustainable developments of the 21st century. The overwhelming response from the international professional community was reflected in the 521 contributions received from authors around the world, which made this summit a record in its class. The countries of principal authors in alphabetical order are as follows: Algeria, Armenia, Australia, Austria, Brazil, Canada, China, Czech Republic, Finland, France, Georgia, Germany, Great Britain, Greece, Hong Kong, India, Indonesia, Iran, Ireland, Israel, Italy, Japan, Kazakhstan, South Korea, Kosovo, Macedonia, Madagascar, Malaysia, Mexico, Nepal, Netherlands, Nigeria, Norway, Peru, Poland, Romania, Russian Federation, Rwanda, Saudi Arabia, Serbia, Singapore, Slovenia, South Africa, Spain, Sweden, Taiwan, Turkey, Ukraine, UK, and USA. The biggest contributor countries were China, Russia, Japan, India, Brazil, and United States.

2016 - Sustainable Industrial Processing Summit & Exhibition

2016 SIPS

www.flogen.org/sips2016

Covering 3 Sustainability Pillars: (1) Science, Technology & Industrial Practice (2) Political and Social framework and (3) Education.

Incorporating numerous International Symposia related to: mineral*metals*material-mining*extraction*processing*manufacturing* recycling*waste treatment*energy-environmental/health* legal/ management/financial*policy/social issues



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SYMPOSIUM



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**06 - 10
November
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YANG
INTERNATIONAL
SYMPOSIUM

**Sanya Marriott
Yalong Bay
Hainan-Island
China**

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