CECRI news

CENTRAL ELECTROCHEMICAL RESEARCH INSTITUTE, KARAIKUDI - 630006

[Council of Scientific and Industrial Research]

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New

Process Developed and Released

Water electrolysis is an important technique for hydrogen production. The hydrogen evolution reaction is certainly one of the most intensively studied electrochemical reactions due to its importance in the field of alternative hydrogen based energy production. Hydrogen has been produced commercially by alkaline water electrolysis for over several decades. At present, its large scale application is restrained by higher over voltage of Hydrogen and Oxygen evolution reaction. Stable and reliable performance is a major requirement for industrial conditions. The increase in over potential results in raising the cell voltage and hence a decrease in energy efficiency by 15% over a period of one to two years. Efforts are made by various researchers worldwide, to improve the current and voltage efficiencies of the electrolyser through different approaches, such as improved cell designs, modified/new separator materials, introduction of new electrolysis concepts and several electrode materials etc.

In this effort, Electro Inorganic Chemicals Division is involved in the development of producing surface activated Nickel electrode by electrochemical method for hydrogen generation for alkaline water electrolysis process. This new process on Electrochemical Activation of Electrodes for Hydrogen Generation was released to M/s Eastern Electrolyser Limited, New Delhi who is the leading manufacturer for packaged hydrogen generators in the country, in April 2009, on the following terms:

Lump sum Premium	:	Rs. 2,00,000/-
Nature of License	:	Non-Exclusive
Period of License	:	7 years
Recurring Royalty	:	Nil

Industry Oriented Technology Courses organized

Name of the Course	: Trouble-shooting in Electroplating and Metal finishing
Duration	: 02.03.09 to 07.03.09
No.of participants	: 6
Amount Received	: Rs. 42,000/-

Name of the course	: Lead, Zinc, Cadmium and Tin Plating
Duration	: 09.03.09 to 14.03.09
No. of Participants	: 6
Amount Received	: RS. 28,000/-

Invited Lecture

Dr. K. Krishnamoorthy, Department of Chemistry, University of Massachusetts, USA delivered the invited lecture on Charge Transport in Polymer on April 20, 2009.

Technical Services Undertaken

Title	: Supply of 2 Nos.of 40 W self supporting DBFC Unit
Organization	: M/s Genex Science & Tech Pvt Ltd., Mumbai
Value	: Rs. 157304/-
Title	: Testing of CPCC coated reinforcement rods and chemicals covered by the Patent Nos.481/Del/93 & 259/Del/92
Organization	: M/s RDS – CVCC (JV), Cochin
Value	: Rs. 85450/-
Title	: Utilization of Electrode coating machine for lithium ion cell activity for 120 hours
Organization	: VSBSC, Trivandrum
Value	: Rs. 83124/-
Title	: Evaluation of 2V, 1530Ah VRLA Cells as per IEC 0896 – 21:2004 specification.
Organization	: M/s Amararaja Batteries Ltd.,Tirupathi
Value	: Rs. 214108/

Award

Dr. Muhammad Shahid Anwar, Scientist had conferred with Young Scientist Award (Theme : Physics) of Madhya Pradesh State Council of Science and Technology for his outstanding research paper presented at the 24th M P Young Scientist Congress held at Bhopal during February 28 – March 1, 2009.

Grant-in-aid/Sponsored Projects taken up

Title :Installation and measurement of strain by SMER gauge for ILRT of Unit – 6
Organization :Rajasthan Atomic Power Project,NPCIL, Kota
Value :Rs. 443950/-

Title : Identification of metallic coating and alloys for under water application
Organization : ECIL, Hyderabad
Value : Rs. 355166/-

Title : Identification of organic coatings for Aluminium alloy for under water application
Organization : ECIL, Hyderabad
Value : Rs. 312392/-

Title :Exploration of Sonochemical Methodologies for control of metal nanoparticles for electrochemical reactions
Organization : DST, New Delhi
Value : Rs. 1090200/-

Forthcoming

Industry Oriented Technology Courses: 2009-2010

CECRI is conducting training courses useful for entrepreneurs & practitioners in the following disciplines during August 2009 - March 2010.

- Ø Corrosion Science & Engineering (6 Modules)
- Ø Battery : Science and Technology (2 Modules)
- Ø Electrochemical Materials Science
- Ø Industrial Metal Finishing (2 Modules)
- Ø Electroplating Metal Finishing Technology (3 Modules)

The courses are structured as modules, each lasting for 3-5 days. Candidates can register for as many modules as they desire. Please visit our website: www.cecri.res.in for the course content, fees, date of commencement of each module and application form.

For further details please contact:
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Foreign Deputation

Deputed Dr. P. Sridhar and Mr. A. K. Sahu, Scientists (CECRI Madras Unit) to Germany during 16-20 March 2009 to deliver a lecture in the Second Indo-German Workshop on “Fuel Cells and Hydrogen Energy” organized by the ISTAD, CSIR and German Federal Ministry of Education and Research (BMBF) as per the agreed terms of CSIR – FzJ Programme.

Deputed Dr. D. Velayutham, Scientist to Australia for four months from March 2, 2009 to avail the Australian Endeavour Fellowship.

Consultancy Project taken up

Title : Setting up of Plant for Electroless Nickel Plating on Maraging steel components at ADA, Bangalore
Client : Aeronautical Development Agency [ADA], Bangalore
Value : Rs.307090/-

Retirement on Superannuation on March 31, 2009

Mr. V. Thamilarasu, Security Guard [NT]