

CSIR in Media



75 Years of

CSIR Touching Lives

News Bulletin

11th to 15th September 2019



National Chemical Laboratory sets up pilot plant to produce clean fuel that can replace diesel

CSIR-NCL

15th September, 2019



The pilot plant has been set up under the mission project, 'Catalysis for Sustainable Development', in which NCL scientists have developed indigenous process to create DME from methanol dehydration. City-based National Chemical Laboratory (NCL) has become the first among Council of Scientific and Industrial Research (CSIR) laboratories in the country to set up a pilot plant to produce Dimethyl ether (DME), a clean fuel with potential to replace diesel. The development comes at a time when the Department of Science and Technology (DST) plans to launch five mission projects in areas, including electric mobility, methanol,

research in quantum and Artificial Intelligence (AI), and digital mapping. According to the DST, this is among the many upcoming projects aimed at establishing a methanol-based economy in the country, by making use of various sources. The DST, in an announcement in New Delhi on Sunday, stated that to boost the use of alternate fuel, the central government envisages to establish Centres of Excellence at various places, where research and development works on methanol and DME will be carried out. A range of solid fuels, biodegradable products including crop residue are presently being considered under this methanol scheme. The pilot plant has been set up under the mission project, 'Catalysis for Sustainable Development', in which NCL scientists have developed indigenous process to create DME from methanol dehydration. "This facility, in a miniature form, can be set up onboard ships. This can best suit the Sagarmala programme that aims at reducing the costs of transportation," said an official

working on the project. Scientists argue that burning of clean fuel can help control the pollution levels, thereby contributing towards protecting the environment. An official said, “The DME also can be used in place of diesel in large bore engines, without the need to modify any of the engine design.”

Work at the pilot plant, inaugurated by Dr Harsh Vardhan, Union Minister for Science and Technology, will be jointly carried out with SignAssure Services (India) Limited. “Work to scale-up the technology will be taken up and it is expected to be completed in next one year,” said the minister.

Published in:
[Indian Express](#)

CSIR-CMERI

15th September, 2019

मैन्यूफैक्चरिंग इंडस्ट्री है रीढ़: प्रो हरीश

धनबाद। सीएसआईआर सीएमआईआरआई और आईपीसी इंडिया टेक्नोलॉजी सेंटर के संयुक्त तत्वावधान में शुक्रवार को कोलकाता में एडवांस मैन्यूफैक्चरिंग पर सेमिनार हुआ। इसका उद्घाटन सीएसआईआर सीएमआईआरआई के निदेशक प्रो हरीश हिरानी और आईपीसी के चेयरमैन रवि सेहगल ने किया। प्रो हिरानी ने कहा कि विश्व भर में मैन्यूफैक्चरिंग इंडस्ट्री अर्थव्यवस्था की रीढ़ की हड्डी है। इसके साथ ही भारत जैसे देशों में यह रोजगार सृजन का भी प्रमुख श्रोत है। इसलिए मैन्यूफैक्चरिंग सेक्टर में निर्यात बढ़ाने के लिए अनुसंधान और नवाचार महत्वपूर्ण हो जाते हैं। इसको देखते हुए सीएसआईआर



सीएमआईआरआई में डिजाइन और मैन्यूफैक्चरिंग के संपूर्ण समाधान के लिए सुविधाएं बढ़ाई गई हैं। सीएसआईआर सीएमआईआरआई, दुर्गापुर के एडवांस मैन्यूफैक्चरिंग सेंटर में जानकारी और कौशल विकास के लिए स्टूडेंट्स और इंटरप्रेन्योर को हैंड्स ऑन ट्रेनिंग भी दी जाती है, ताकि विशेष तौर पर एमएसएमई सेक्टर में देश भर

में अधिक से अधिक रोजगार को बढ़ावा मिले। आईपीसी के चेयरमैन रवि सेहगल ने कहा कि आईपीसी केंद्रीय वाणिज्य और उद्योग मंत्रालय की इंप्लीमेंटिंग एजेंसी के तौर पर है, जिसका बेंगलुरु के बाद अब कोलकाता में टेक्नोलॉजी सेंटर है। एमएसएमई सेक्टर में सीएसआईआर सीएमआईआरआई, दुर्गापुर बड़ी भूमिका निभा रही है।

Published in:

Dainik Bhaskar

CSIR-CMERI

15th September, 2019

উৎপাদন শিল্পকে সহায়তায় উদ্যোগী সিএমইআরআই

নিজস্ব প্রতিনিধি, কলকাতা: ইইপিসি ইন্ডিয়া টেকনোলজি সেন্টারের সঙ্গে যৌথভাবে অ্যাডভান্সড ম্যানুফ্যাকচারিংয়ের উপর একটি আলোচনাসভার আয়োজন করল দুর্গাপুরের সিএসআইআর-সেন্ট্রাল মেকানিক্যাল ইঞ্জিনিয়ারিং রিসার্চ ইনস্টিটিউট। শুক্রবারের ওই আলোচনাসভায় সিএমইআরআইয়ের ডিরেক্টর হরীশ হিরানি জানান, যেহেতু কর্মসংস্থানের জন্য উৎপাদন শিল্পে জোর দেওয়া ছাড়া উপায় নেই, তেমনই তার উদ্ভাবন ও গবেষণাও জরুরি। সেই কথা মাথায় রেখেই তাঁরা ছোট ও মাঝারি শিল্পের ডিজাইন ও উৎপাদন সংক্রান্ত কৌশল তৈরিতে এগিয়ে এসেছেন। ওই ট্রেনিংয়ে পড়ুয়া ও উদ্যোগপতিদের দক্ষতা বৃদ্ধির সুযোগ রয়েছে।

Published in:

Bortaman

NML signs MoU with Mumbai firm

CSIR-NML

15th September, 2019

National Metallurgical Laboratory (NML), Jamshedpur and Evergreen Recycle Karo Private India Limited, Mumbai, inked a Memorandum of Understanding (MoU) to boost cooperation in the sector of e-waste recycling. The agreement was signed for the extraction of cobalt metal/salt from the black powder of li-cobalt batteries. MoU transfer took place in presence of the company's CEO Rajesh Gupta and Rajeev Singhvi along with Indranil Chatteraj, director, NML.

On this occasion, CEO of Evergreen Recyclekaro Company, Rajesh Gupta, expressed satisfaction with the previous technology and was also very much excited for this part to extract cobalt from waste mobile phone batteries. He said soon they will start the process on ton scale in association of NML.

Dr. Manis Kumar Jha, principal scientist of CSIR-NML, Jamshedpur, said that NML has expertise in developing feasible technologies to treat electronic waste being generated in huge quantity. He marked that NML is ready with different technologies and wished to enhance and explore more potential in the area of e-waste recycling so as to enhance its societal uses in health, agriculture, industrial application, training and exchange of knowledge.

Director NML, Dr. Indranil Chatteraj was very happy to express his feeling as NML has transferred 8 technologies in very short period and said much more is expected in recent times. The transfer of MoU was mentioned to be a great step towards the "Swachhata Abhiyan" and each team member was very much proud to be a part of this 'abhiyan'.

Both sides agreed to further explore more possibilities for collaboration in areas of electronic waste recycling. Huge generation of mobile phone batteries, its rudimentary disposal, improper collection system as well as lack of cost-effective processing technology has resulted in loss of valuables encapsulated in it.

No effective technologies exist at present within the country for safe recycling of electronic waste in the industry. In this regard, CSIR- National Metallurgical Laboratory, Jamshedpur has made sincere efforts towards the ecological recovery of cobalt and other valuable metals from the black powder and other constituents of LIBs. But heterogeneous nature of variety of batteries (branded, local and cheaper) received from the municipal waste put forward a great challenge during the technology development.

The active cathode materials of LIBs contain variable concentration of cobalt, lithium, copper, manganese, etc. which make the chemical processes for metal recovery more complex. But the hydrometallurgical route adopted by the CSIR-NML team is very selective and exigent.

Published in:
[The Pioneer](#)

CSIR-CSMCRI

14th September, 2019

ભાવનગરની સોલ્ટ ઈન્સ્ટીટ્યૂટ શેવાળના સંશોધનમાં અગ્રેસર કહેવાય સમુદ્રી શેવાળ પરંતુ ભારતમાં ૬૦થી વધુ કંપનીઓ શેવાળના ઉત્પાદનમાં કાર્યરત

‘જિજ્ઞાસા’ કાર્યક્રમ અંતર્ગત દક્ષિણ ગુજરાતના છાત્રોએ લીધી મુલાકાત



ભાવનગર

ભાવનગરની સેન્ટ્રલ સાલ્ટ એન્ડ મરીન કેમિકલ રિસર્ચ ઈન્સ્ટીટ્યૂટમાં તાજેતરમાં પાંચમો જિજ્ઞાસા કાર્યક્રમ યોજવામાં આવ્યો હતો. આ કાર્યક્રમ ૧૨-૧૩ સપ્ટેમ્બર એમ બે દિવસનો હતો. જેમાં સુરત, સિલવાસા અને અંકલેશ્વરના ૫ કેન્દ્રીય વિદ્યાર્થીઓના ૫૫ વિદ્યાર્થીઓ અને ૮ શિક્ષકો ઉપસ્થિત રહ્યા હતા.

જિજ્ઞાસા કાર્યક્રમનો ઉદ્દેશ વિજ્ઞાન પ્રત્યે આકર્ષણ અને રુચિ ધરાવવાનો હતો. સેન્ટ્રલ સાલ્ટના જુદા જુદા વિભાગોના વૈજ્ઞાનિકોએ વિદ્યાર્થીઓને વિવિધ સેત્રો વિષે વિસ્તારથી માહિતી આપી જેમાં સમુદ્રી શેવાળની જાણકારી, ખેતી અને ઉત્પાદન વિષે વૈજ્ઞાનિક મોનીટીંગ ગજાનન કાવલે દ્વારા એક વિસ્તૃત વ્યાખ્યાન આપવામાં આવ્યું હતું. જેમાં વિદ્યાર્થીઓએ આ શેવાળ મોટાભાગે સમુદ્રી કિનારાઓના પથ્થરો ધાર તથા દરિયાના અંદરના વિસ્તારોમાં ઘન નાના છોડ રૂપે જોવા મળે છે. શેવાળના પણ ઘણા પ્રકાર હોય છે. લાલ શેવાળ તરીકે ટ્રેસિલારીઆ ડ્યૂરા વિષે પણ સમજાવ્યું. જેમાં અગર નામના કોષીય તંતુ રહેલા હોય છે. ટ્રેસિલારીઆ

ડ્યૂરા જે ઔદ્યોગિક રીતે ખુબ મહત્વ ધરાવે છે. જેમાંથી અગર, કેરાઈનન જેવા તત્વોનું નિષ્કાસન કરવામાં આવે છે. આ તત્વોનો ઉપયોગ વિવિધ ખાદ્ય પદાર્થો બનાવવામાં થાય છે. આ ઉપરાંત લીલી શેવાળ જેમ કે મોનોસ્કોમાં જેનો મુખ્યત્વે ખોરાક રૂપે ઉપયોગ કરવામાં આવે છે. તેની ઉત્પત્તિ અને દરિયાઈ ખેતી ની પદ્ધતિ વિષે માહિતી આપવામાં આવી હતી. ભારતમાં ૬૦ કરતા વધુ કંપનીઓ શેવાળના ઉત્પાદનમાં કાર્યરત છે. લાલ શેવાળ ની ખેતી મુખ્યત્વે તરતા રાફ્ટ, ટ્યૂબે નેટ તેમજ લાંબી દોરી ની પદ્ધતિ દ્વારા કરવામાં આવે છે. લાલ શેવાળની ખેતી માટે મસિલરીયા ડ્યૂરા અને કાપ્પાક્રુપકસ સૌથી મહત્વપૂર્ણ શેવાળ છે. આ તમામ લાલ અને લીલી શેવાળ વિદ્યાર્થીઓ એ પ્રયોગશાળા માં લઈ જઈ નિરીક્ષણ કરાવવામાં આવ્યું હતું. અહીં તેઓ એ દોરી ની મહક ધી રાફ્ટ અને ટ્યૂબે નેટ કઈ રીતે ખેતી માં ઉપયોગ માં આવે છે તેની વિગતવાર માહિતી ષેકિટકલ દ્વારા સમજાવવામાં આવી

હતી. તમામ વિદ્યાર્થીઓ એ મોનોસ્કોમાં, કાપ્પાક્રુપકસ અને મસિલરીયા ડ્યૂરા લેબ માં જોયા અને પ્રાયોગિક રીતે નિહાળ્યા. આ દરમિયાન તેમને આ શેવાળ નો ઉપયોગ અને ક્ષયદાઓ પણ જણાવ્યા. આ બધીજ સમુદ્રી શેવાળ ના વિવિધ ઉપયોગો જણાવતા તેમને જાપાન, કિલિપાઈન્સ, ઈન્ડોનેશિયા વગેરે દેશો માં ખોરાક તરીકે ના વિવિધ પ્રકરણો તેમજ તેમની સ્વાસ્થ્ય ઉપર પ્રભાવ અંગે ની સવિસ્તાર જાણકારી આપી હતી. આ સાથે બધાજ વિદ્યાર્થી તેમજ શિક્ષકો એ સમુદ્રી શેવાળ વિષે ના વ્યાખ્યાન સાથે જિજ્ઞાસા કાર્યક્રમની પુર્ણાહુતી થઈ હતી.

Published in:

Sandesh

राष्ट्रीय धातुकर्म प्रयोगशाला में हिंदी दिवस सप्ताह का समापन, बोले इंद्रनील चट्टोराज

हिंदी संसार की सबसे सरल भाषा है

लाइफ रिपोर्टर @ जमशेदपुर

राष्ट्रीय धातुकर्म प्रयोगशाला में पिछले एक सप्ताह से चल रहे हिंदी दिवस सप्ताह का समापन शुक्रवार को हो गया. मुख्य अतिथि राष्ट्रीय धातुकर्म प्रयोगशाला के निदेशक डॉ इंद्रनील चट्टोराज ने कहा कि हिंदी दुनिया की सबसे सरल भाषा है. यह जैसे बोली जाती है वैसे ही लिखी भी जाती है. देश की स्वतंत्रता के बाद हिंदी को भारत की राजभाषा होने का गौरव हासिल हुआ. विश्व में हिंदी तीसरी सबसे बड़ी बोली जाने वाली भाषा है. उन्होंने राजभाषा हिंदी की संभावनाओं व चुनौतियों पर चर्चा की. उन्होंने अपने सहकर्मियों को ज्यादा से ज्यादा हिंदी में कार्य करने की बात कही. साथ ही बताया कि एनएमएल में हिंदी में भी वेबसाइट चलाई जाती है. इस मौके पर संस्थान में हिंदी के विकास विस्तार के लिए कार्य करने वाले कर्मियों को सम्मानित भी किया गया.



करियर संवार सकती है हिंदी

युवाओं में हिंदी के प्रति ललक देखी जा रही है. जमशेदपुर में अधिक-से-अधिक गैर हिंदी भाषी युवा हिंदी भाषा या हिंदी माध्यम में पढ़ाई कर रहे हैं. उनका मानना है कि भविष्य में हिंदी उनका करियर संवार सकती है. हिंदी को लेकर युवा कुछ इस तरह से सोचते हैं.

"मेरी मातृभाषा कुड़माली है. मैंने हिंदी से पीजी किया. शिक्षण के क्षेत्र में करियर बनाना चाहता हूं. इसलिए बीएड कर रहा हूं.



- निवास चंद्र महतो

"मैं गांव में हो भाषा में

"मैं पटमदा का रहने वाला हूं. मेरी भाषा बांग्ला है. हिंदी में करियर की अधिक संभावना को देखते हुए मैंने इस भाषा को चुना. टीचर्स ट्रेनिंग कर रहा हूं.



- शिबू रजक

"मैं राजनगर का रहने

"मेरी मातृभाषा ओड़िया है. लेकिन मैंने हिंदी में पढ़ाई की है. मुझे नाटक में रुचि है. हिंदी में कई नाटकों में अभिनय कर चुकी हूं. अभिनय के क्षेत्र में करियर बनाना चाहती हूं.



हिंदी ने बनाया करियर

Published in:

Prabhat Khabar

Success of odd-even rule will depend on availability of public transport: Experts | Opinion

CSIR-NPL

14th September, 2019

Delhi Chief Minister Arvind Kejriwal, while proposing that his government is likely to bring back the **odd-even road rationing scheme** between November 4 and 15, said that the government would take into consideration past experiences. However, studies done to find out the effect of the odd-even of Delhi's pollution after the AAP government introduced the odd-even for the first time in 2016, have shown that the road rationing scheme didn't have the desired impact.

The odd-even vehicle restriction scheme introduced in Delhi for the first time in January 2016 could reduce pollution levels by just around 2 – 3%, a study done by a team of scientists from IIT-Delhi, IIT-Kanpur, IITM-Pune, CSIR and the TERI, had concluded. Only three pockets in the city – Najafgarh, Shalimar Bagh and Greater Kailash – registered around 8 – 10% in pollution levels. A similar study by researchers from Environmental Sciences and Biomedical Metrology Division at the National Physical Laboratory and JNU also said that there was little effect of the vehicle rationing scheme on Delhi's environment. A few other studies, however, backed the scheme saying it helped to bring down pollution levels. Experts from the Centre for Science and Environment suggested that as an “emergency measure”, the scheme prevented air pollution levels from getting worse.

Even though questions loom over the efficacy of the road rationing scheme in bringing down pollution in the national capital, experts from TERI, a policy research organization, in its assessment of the scheme during the first phase at four monitoring stations --- Mandir Marg, Punjabi Bagh, Anand Vihar and R K Puram --- had stated that the plan did help decongest Delhi roads. Experts said that the efficacy of the scheme would depend much on the availability of public transport.

If public transport is robust, the government would be in a position to include all vehicles in the scheme, including more than 60 lakh two-wheelers that contribute heavily to the city's pollution. The odd-even car rationing scheme was implemented in Delhi first between January 1 and 15, 2016 and then from April 15-30. In all the editions, two-wheelers, women-driven cars besides emergency and police vehicles remained exempt.

Later in December 2017, the AAP government had failed to roll out the odd-even scheme after the NGT refused to give any exemption to two-wheelers, saying such a relaxation would defeat the purpose of improving Delhi's ambient air quality. The biggest hurdle that the AAP government is likely to face in the implementation of the scheme is the limited number of public buses in their fleet. An analysis by CSE shows that the city needs at least 11,000 buses, as against the 5454 buses it currently has, to cater to its population.

In the first phase of the vehicle rationing scheme in 2016, school vacations helped the government to rope in school buses into their fleet to ferry the increased passenger load. Most of the increased traffic, however, was handled by the Delhi Metro. But now, the hike in the fare introduced in 2017, has made the service inaccessible to the poor commuters. The government, however, said that it is working on the finer details of the scheme including exemptions.

“Transport sector contributes around 25% - 28% to Delhi's overall pollution load. If we can control this we would be able to improve air quality. This is a welcome move but it needs to be implemented without many exemptions. For that, you need a robust public transport system. Only we would be able to see good results,” said D Saha, former head of the CPCB's air quality laboratory.

Published in:
[Hindustan Times](#)

CSIR-IMMT

14th September, 2019

सीएसआईआर-खनिज एवं पदार्थ प्रौद्योगिकी संस्थान, भुवनेश्वर में हिंदी पखवाड़ा समारोह

भुवनेश्वर. पिछले वर्षों की तरह इस वर्ष भी सीएसआईआर-खनिज एवं पदार्थ प्रौद्योगिकी संस्थान, भुवनेश्वर में 2 से 16 सितंबर तक हिंदी पखवाड़ा समारोह मनाया जा रहा है. इस अवसर पर कर्मचारियों, छात्रों, अध्येताओं और परियोजना कर्मचारियों के लिए हिंदी में निबंध, वाद-विवाद, टिप्पण एवं प्रारूपण और हिंदी कविता-पाठ आदि कई प्रतियोगिताएं आयोजित की गईं. बहुत बड़ी संख्या में प्रतिभागियों ने उत्साह के साथ उपर्युक्त प्रतियोगिताओं में भाग लिया. सभी प्रतियोगिताओं में लगभग 50 छात्र-छात्राओं ने विभिन्न विषयों पर कविता पाठ किया. उल्लेखनीय है कि पखवाड़ा का समापन समारोह 16 सितंबर को आयोजित किया जाएगा, जिसमें डॉ. ओ पी वर्मा, वैज्ञानिक (सस्य विज्ञान) एवं हिंदी अधिकारी, भा कृ अ सं-भारतीय जल प्रबंधन संस्थान, भुवनेश्वर मुख्य अतिथि होंगे. सीएसआईआर-आईएमएमटी के निदेशक प्रोफेसर एस बसु इस समारोह की अध्यक्षता करेंगे.

Published in:

Navbharat Times

CSIR-IMMT

14th September, 2019

ଆଇଏମ୍‌ଏମ୍‌ଟିରେ ହିନ୍ଦୀ ପକ୍ଷ ପାଳିତ

ଭୁବନେଶ୍ୱର, ୧୩୯ (ବୁଧବେଳା): ସିଏସଆଇଆର-ଖଣିଜ ଏବଂ ବସ୍ତୁ ପ୍ରଯୁକ୍ତି ପ୍ରତିଷ୍ଠାନ (ଆଇଏମ୍‌ଏମ୍‌ଟି) ଭୁବନେଶ୍ୱର ପକ୍ଷରୁ ୨୦ ରୁ ୧୬ ସେପ୍ଟେମ୍ବର ପର୍ଯ୍ୟନ୍ତ ହିନ୍ଦୀ ପକ୍ଷ ପାଳିତ ହେଉଛି । ଏହି ଅବସରରେ ସବୁ କର୍ମଚାରୀ, ଛାତ୍ରଛାତ୍ରୀଙ୍କ ମଧ୍ୟରେ ହିନ୍ଦୀ ଭାଷାରେ ବହୁତ ପ୍ରତିଯୋଗିତା ଅନୁଷ୍ଠିତ ହୋଇଛି । ଅନେକ ପ୍ରତିଯୋଗୀ ଏହି ପ୍ରତିଯୋଗିତାରେ ଭାଗ ନେଇଥିଲେ । ଏହି ହିନ୍ଦୀ ପକ୍ଷ ପାଳନ ସମୟରେ କର୍ମଚାରୀମାନଙ୍କ ପୁଅ, ଝିଅମାନେ ଭାଗନେଇଥିଲେ । ହିନ୍ଦୀ ପ୍ରବନ୍ଧ ପ୍ରତିଯୋଗିତା ଆୟୋଜନ ହୋଇଥିଲା । ୫୦ ଜଣ ଛାତ୍ରଛାତ୍ରୀ ଭାଗନେଇ ଦେଶଭକ୍ତି, ନାରୀ ଅଧିକାର ଆଦି ବିଷୟରେ ବିଭିନ୍ନ କବିତା ପାଠ କରିଥିଲେ । ଉଦଯାପନା ଦିନ ବୈଜ୍ଞାନିକ ଏ ପି ଶର୍ମା (ଶସ୍ୟ ବିଜ୍ଞାନ) ଏବଂ ହିନ୍ଦୀ ଅଧିକାରୀ ଭାରତୀୟ ଜଳ ପ୍ରବନ୍ଧନ ଅନୁଷ୍ଠାନ ଭୁବନେଶ୍ୱର ମୁଖ୍ୟ ଅତିଥି ଭାବେ ଯୋଗଦେବେ । ସିଏସଆଇଆର-ଆଇଏମ୍‌ଏମ୍‌ଟିର ନିର୍ଦ୍ଦେଶକ ପ୍ରଫେସର ଶୁଭସତ୍ତ୍ୱ ବସୁ ଏହି ସମାରୋହରେ ଅଧ୍ୟକ୍ଷତା କରିବେ । ଏହିଦିନ ମଧ୍ୟ ବହୁ ପ୍ରତିଯୋଗିତା ହେବ । କୃତୀ ପ୍ରତିଯୋଗୀଙ୍କୁ ପୁରସ୍କୃତ କରାଯିବ । ହେମନ୍ତ କୁମାର ତ୍ରିପାଠୀ, ମୁଖ୍ୟ ବୈଜ୍ଞାନିକ ଏବଂ ହିନ୍ଦୀ ପକ୍ଷ ସମାରୋହର ସଂଯୋଜକ ଏବଂ ଶ୍ରୀ ଚିତ୍ତି ରାଜୁ, ହିନ୍ଦୀ ଅଧିକାରୀ , ବରିଷ୍ଠ ବୈଜ୍ଞାନିକ ଡା. ମନୀଷ କୁମାର ପ୍ରମୁଖ ଯୋଗଦେବେ ।

Published in:

Premaya

NML signs MoU for gold extraction

CSIR-NML

13th September, 2019

CSIR-National Metallurgical Laboratory (NML) has signed a MoU for technology transfer to M/s Exigo Recycling Private Limited, New Delhi for the extraction of cobalt and gold from the lithium cobalt battery of mobile phones and gold coated surface of e-waste, respectively. The company's CEO, Raman Sharma is very much satisfied with developed technology and is soon willing to start the process on ton scale in association of NML. Dr Indranil Chatteraj, director, CSIR-NML, was present during the transfer of MoU through audio-visual conferencing.

One of the scientists present there explained that these types of collaboration work initiated by CSIR-NML would be helpful to demonstrate the recovery of metals like cobalt and gold on large scale. This initiation will not only prove to be fruitful to the unorganised sectors but also meet the need of the market. This will help to establish a proper collecting system. As nowadays, the quantity of these discarded equipment is increasing with disquieting rate all over the world due to rudimentary disposal, improper collection system as well as lack of cost-effective technology for processing them. Among these e-waste, mobile phones constitutes a major fraction of e-waste. Lithium ion batteries (LIBs) dominantly used in mobile phones consist of metals, organic chemicals and plastics materials.

Moreover, gold containing electronic scraps are wasted due to lack of proper processing technology. Presence of such precious and valuable metals do not allow us to dispose them. But in India, especially in case of LIBs, random chopping of scrap batteries to get metal values is done. In this course of processing, the black powder containing LiCoO_2 along with many hazardous organic liquids is thrown which contaminate the soil and underground water.

However, the scraps generated during manufacturing printed circuit boards (PCBs) also contain significant amount of gold, which either wasted or smelted as exported. Therefore, development of a recycling technology to recuperate metals from such scraps has gathered great attention as this step will not only protect the environment but also improve the utilisation of secondary resources.

CSIR-NML has developed a complete and novel process which consists of physical beneficiation, leaching, solvent extraction, precipitation and electro-winning processes for recycling of spent lithium ion batteries to get value added product (metal or salts) and protect the environment, based on zero waste concept.

Moreover, the extraction of precious metal gold was also successfully developed using the hydrometallurgical route of leaching and adsorption/ cementation. The novelty for the cobalt extraction process is the development of complete recycling flow-sheet for the recovery of plastics and all metals such as Co, Cu, Mn and Fe from scrap LIBs. Feasible and environmental friendly flow-sheet is also developed for gold coated electronic scraps (some printed circuit boards manufacturing scraps were provided by the Exigo Company) to extract pure gold metal.

Published in:
[The Pioneer](#)

एनएमएल ने किया एक्सगो रिसाइक्लिंग प्राइवेट लिमिटेड के साथ ई-वेस्ट रि-साइकिल टेक्नोलॉजी ट्रांसफर एग्रीमेंट

खबर मन्त्र ब्यूरो

जमशेदपुर। एनएमएल की ओर से बुधवार 11 सितंबर 2019 को एक्सगो रिसाइक्लिंग प्राइवेट लिमिटेड नयी दिल्ली के साथ तकनीक साझा करने का करार किया गया है। इस एमओयु के तहत इ कचरा से कोबाल्ट, सोना और सोना लेपित निकालने की तकनीक साझा की गयी। मौके पर एनएमएल के निदेशक डॉ इंद्रनील चट्टोराज, प्रधान वैज्ञानिक डॉ मनीष कुमार झा, सीनियर रिसर्चर अर्चना कुमार, रेखा पांडा, वैज्ञानिक डॉ रंजीत कुमार सिंह, आरपीबीडी प्रमुख डॉ अमिताभ मित्रा और एक्सगो रिसाइक्लिंग प्राइवेट लिमिटेड के रमण शर्मा ने भाग लिया। टेक्नोलॉजी पर इलेक्ट्रॉनिक माध्यम से हुआ। एनएमएल के प्रधान वैज्ञानिक डॉ मनीष कुमार झा इस टैक्नालाजी ट्रांसफर मिशन के प्रमुख हैं।

अधिकारियों की राय

हमें बहुत प्रसन्नता हो रही है कि एनएमएल ने हाल में 8 टेक्नोलॉजी इ वेस्ट रिसाइक्लिंग के क्षेत्र में की है। भविष्य में और भी होगी।
- डॉ इंद्रनील चट्टोराज, निदेशक, एनएमएल।



मुझे बहुत अच्छा लग रहा है कि मैं और एनएमएल टीम भारत सरकार के स्वच्छता मिशन के अनुरूप काम कर रहा हूँ। औद्योगिक क्षेत्र की तमाम कंपनी हमारे तकनीक से प्रसन्न हैं।
- डॉ मनीष कुमार झा, प्रधान वैज्ञानिक, एनएमएल



बारीडीह बस्ती में कांग्रेस का जागरण अभियान

जमशेदपुर। संध्या 4 बजे से पूर्वी सिंहभूम जिला कांग्रेस कमेटी के अध्यक्ष विजय खां के निर्देश पर पदयात्रा कार्यक्रम के संयोजक योगेंद्र शर्मा उर्फ मुन्ना शर्मा जी ने किया। जनजागरण अभियान में पदयात्रा से 86 बस्ती को मालिकाना हक का मामला उठाया गया। जिसमें ध्वनि यंत्र से जनता को संबोधित भी किया गया। बारीडीह बस्ती के

■ वरिष्ठ कांग्रेसी योगेंद्र शर्मा कर रहे अभियान की अगुवाई जनता में सरकार के खिलाफ जबरदस्त आक्रोश दिखा। अभियान में पदयात्रा बजरंग चौक बारीडीह बस्ती से होते हुए हरी मैदान, भोजपुर कॉलोनी, सुभाष पाठ, मीरा पथ, जिला स्कूल, टीओपी मैदान, निराला पथ, जय शंकर पथ होते बजरंग चौक पर समापन हुआ।

Published in:

Khabar Mantra

CSIR-IGIB

12th September, 2019

ईम्युनो-प्रोटोमिक्स पर राष्ट्रीय कार्यशाला सम्पन्न

संवाददाता

दिल्ली। दिल्ली विश्वविद्यालय परिसर के माल रोड स्थित जिनोसिक एवं सम्बन्धित जीव विज्ञान संस्थान (आई.जी.आई.बी.) में विगत दिनों ईम्युनो प्रोटोमिक्स पर राष्ट्रीय कार्यशाला का आयोजन 29 और 30 अगस्त 2019 को डॉ. सागरिका विश्वास की देखरेख में सम्पन्न हुआ। दो



दिवसीय कार्यशाला में देश के विभिन्न संस्थान से 36 प्रतिभागियों एवं 13 डेलिगेट ने वैज्ञानिक उपकरणों पर प्रशिक्षण प्राप्त किया और हस्त प्रशिक्षण में रोगी के नमूनों (सैम्पल) पर प्रोटीन की खोजबीन की। कार्यशाला के दौरान विभिन्न वैज्ञानिकों/शिक्षकों द्वारा प्रशिक्षण एवं चर्चा-परिचर्चा पर विशेष ध्यान दिया गया। आई.एम.एस. गाजियाबाद के

डॉ. उमेश ने भी कार्यशाला में व्याख्यान दिया। ऐमिटी विश्वविद्यालय के डॉ. ध्रुव कुमार सहित विभिन्न संस्थान के वैज्ञानिकों का व्याख्यान भी प्रशंसनीय रहा।

अंत में कार्यशाला की आयोजिका डॉ. सागरिका विश्वास ने सभी प्रतिभागियों एवं वैज्ञानिकों के साथ-साथ संस्थान के निदेशक महोदय का धन्यवाद ज्ञापन किया।

Published in:

Grace India Times

Himachal biggest producer of marigold essential oil

CSIR-IHBT

11th September, 2019

With recent reports showing more than one lakh hectares of cultivated area affected by monkeys and other animals in Himachal Pradesh resulting in crop losses of up to 55% and monetary losses of more than Rs 324 crores to agriculture and horticulture crops collectively, the CSIR-Institute of Himalayan Bioresource Technology (IHBT), Palampur (HP), has intensified efforts to minimise such losses. In this regard, IHBT supports farmers by introducing high value aromatic crops such as wild marigold, damask rose, lavender, rosemary, lemongrass and mushkbala under CSIR aroma mission. This will help farmers revive their economy and double their income. Moreover, such crops are good for cultivation in marginal and wasteland and they do not get affected by wild and stray animals.

Sanjay Kumar, director, CSIR-IHBT, Palampur, said farmers of remote areas in hills were taking up cultivation of aromatic crops to revive agriculture as they face crop loss due to wild animals, monkeys and stray animals. With the efforts of CSIR-IHBT, Himachal Pradesh has become largest producer of high quality wild marigold essential oil (4 tonnes per annum) in India to meet the demands of perfume, flavouring and condiment industries. The main wild marigold growing regions are Bhatiyat and Salooni in district Chamba, Seraj and Gogardhar in district Mandi, Banjar in district Kullu and Rampur in district Shimla. Other prominent regions of wild marigold are Batote and Kishtwar in J&K and Bageshwar and Nainital in Uttarakhand. Kumar said during the last two years, CSIR-IHBT had brought more than 500 hectare of area under these crops. Cultivation of wild marigold has resulted in production of 7.6 tonnes of essential oil in Himachal Pradesh alone with revenue generation amounting to Rs 5.56 crores, benefiting 861 farmers. Kumar said to promote cultivation of these aromatic crops, a complete package of agro and processing technologies had been developed and executed in the farmers' fields.

This would help them realize the profits. Depending upon the quality and quantity of essential oil, farmers of hills could earn net profit between Rs 80,000 to Rs 1.5 lakh per hectare annually, he added. He said essential oil extracted from aromatic crops had huge demand in perfumery, flavour and fragrance industry in India and abroad. The essential oils also have insect repellent properties, anti-inflammatory, antifungal and antibacterial characteristics, which make them useful in numerous applications like control of store grain insect pests, healing wound and treatment of eczema, diaper rash, psoriasis and for skin ointment. He said to uplift the cultivation of aromatic crops different small societies of progressive farmers had been formed in different states by CSIR-IHBT. Nineteen processing units have been set up for these societies.

Published in:

[The Times of India](#)



Please Follow/Subscribe CSIR Social Media Handles



[CSIR INDIA](#)



[CSIR_IND](#)



[CSIR India](#)