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સેન્ટ્રલ સોલ્ટ સંસ્થા દ્વારા આજથી ''વન-વીક-વન-લેબ''નો આરંભ

11 એપ્રિલે સ્ટાર્ટ-અપ અને ઉદ્યોગ મીટનું આયોજન કરાયું

ભાવનગર |

ભાવનગરની સેન્ટ્રલ સોલ્ટ એન્ડ મરિન કેમિકલ્સ રિસર્ચ ઈન્સ્ટિટ્યૂટ દ્વારા 10 એપ્રિલથી 14 એપ્રિલ દરમિયાન ''વન-વીક-વન-લેબ''નું આયોજન કરી રહ્યું છે. આ રાષ્ટ્રવ્યાપી પહેલ વિવિધ સંકલિત કાર્યક્રમો દ્વારા સમાજને CSIR પ્રયોગશાળાઓના વારસા અને સિદ્ધિઓ દર્શાવવા માટે શરૂ કરવામાં આવી છે. આ સમયગાળામાં વિવિધ કાર્યક્રમોનું આયોજન કરવામાં આવશે; સંસ્થાનો સ્થાપના દિવસ 10 એપ્રિલને સોમવારે ઉજવાશે. સંસ્થાની સંશોધન પ્રવૃત્તિઓ પર મોડેલ પ્રદર્શન અને પોસ્ટર પ્રદર્શનનો સમાવેશ થાય છે. આ દિવસે આમંત્રિત વિદ્યાર્થીઓ અને અન્ય તમામ રસ ધરાવતા વ્યક્તિઓ માટે સંસ્થાના સંશોધન અને વિકાસને જોવા માટે ખુલ્લો રહેશે.

સ્ટાર્ટ-અપ અને ઉદ્યોગ મીટ તા.11ને મંગળવારે યોજાશે. જેમાં CSIR-CSMCRI વૈજ્ઞાનિકો, ઉદ્યોગના લોકો અને સ્ટાર્ટ-અપ્સ ઉદ્યોગ/સમાજની સેવામાં CSIR-CSMCRI સંશોધન આઉટપુટ પર આધારિત બિઝનેસ તકો અને તેના પર ચર્ચા વિચારણા કરવામા આવશે. તો 12 એપ્રિલને બુધવારે કૌશલ્ય વિકાસને સમર્પિત કરવામાં આવશે જેમાં કોલેજના વિદ્યાર્થીઓને સીવીડની ખેતી અને પ્રક્રિયા, પાણી ગાળણ એકમો, સૌર ખારાશની કામગીરી વગેરે જેવા વિવિધ ક્ષેત્રોમાં CSIR-CSMCRI સંશોધનનું નિપુણતા પૂર્વક પ્રાયોગિક એક્સપોઝર આપવામાં આવશે.

તા.13ને ગુરૂવારે CSIR-CSMCRI કેમ્પસમાં વિજ્ઞાન પ્રદર્શન અને આઉટરીચ પ્રવૃતિઓનુ આયોજન કરવામાં આવશે, જેમાં વૈજ્ઞાનિક-વિદ્યાર્થીઓ વચ્ચે ચર્ચા વિચારણા, વિજ્ઞાન ઉત્સાહીઓની ભાગીદારી અને પ્રખ્યાત વ્યક્તિઓ દ્વારા વિજ્ઞાન પ્રવચનો મુખ્ય આકર્ષણ રહેશે. અંતિમ દિવસ તા.14ને શુક્રવારે ભવ્ય કાર્યક્રમ યોજાશે. ઓર્ગેનાઈઝિંગ કમિટીના ચેરમેન ડૉ. પુયમ સોભિન્દ્રો સિંહે જણાવ્યું કે અઠવાડિયા સુધી ચાલનારા આ કાર્યક્રમોમાં લગભગ 3000 શાળા-કોલેજના વિદ્યાર્થીઓ, ખેડૂતો સહિત હજારો સામાન્ય લોકોને ફાયદો પહોંચાડવાની અપેક્ષા છે. ડૉ. કમલેશ પ્રસાદ, હેડ, બિઝનેસ ડેવલપમેન્ટ ગ્રુપ, CSMCRIએ માહિતી આપી હતી કે 10 એપ્રિલના રોજ ''વન-વીક-વન-લેબ''ના ઉદ્ઘાટન સમારોહમાં અનેક એમઓયુની આપ-લે કરવામાં આવશે.

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CSIR-CSMCRI

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सीएसआईआर-सीएसएमसीआरआई 10 से 14 अप्रैल के दौरान वन-वीक-वन-लैब अभियान का आयोजन करेगा

सांसद डॉ. भारती शियाल और राजेंद्रसिंह राणा पूर्व सांसद, भावनगर द्वारा 'वन-वीक-वन-लैब' कार्यक्रम का उद्घाटन प्रस्तावित

भावनगर। सीएसआईआर–केन्द्रीय नमक व समुद्री रसायन अनुसंधान संस्थान (सीएसआईआर–सीएसएमसीआरआई), भावनगर, गुजरात में वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद (सीएसआईआर), नई दिल्ली के तत्वावधान में कार्यरत प्रमुख राष्ट्रीय अनुसंधान संस्थानों में से एक है। सीएसआईआर–सीएसएमसीआरआई 10–14 अप्रैल, 2023 के दौरान एक सप्ताह का 'एक सप्ताह एक प्रयोगशाला (वन–वीक–वन–लैब)' अभियान का आयोजन कर रहा है। यह राष्ट्रव्यापी पहल माननीय राज्य मंत्री (स्वतंत्र प्रभार), विज्ञान और प्रौद्योगिकी मंत्रालय, पृथ्वी विज्ञान मंत्रालय, डॉ. जितेंद्र सिंह द्वारा 6 जनवरी 2023 को विभिन्न एकीकृत कार्यफ्मों के माध्यम से समाज को सीएसआईआर प्रयोगशालाओं की विरासत और उपलब्धियों को प्रदर्शित करने के लिए

शुरू की गई है। सीएसएमसीआरआई का शोध समुद्री संसाधनों पर केंद्रित है, जिसमें अन्वेषण, दोहन और रूपांतर शामिल है। सप्ताह भर के दौरान प्रत्येक दिन विभिन्न कार्यक्रमों का आयोजन किया जाएगा; 10 अप्रैल, 2023 (सोमवार) को संस्थान का स्थापना दिवस मनाया जाएगा जिसमें संस्थान की अनुसंधान गतिविधियों पर मॉडल प्रदर्शनियां और पोस्टर प्रदर्शन शामिल हैं। यह दिन आमंत्रित छात्रों और अन्य सभी इच्छुक व्यक्तियों के लिए संस्थान के अनुसंधान एवं विकास को देखने के लिए खुला रहेगा। संस्थान के वरिष्ठ वैज्ञानिक एवं पीआरओ डॉ. कान्ति भूषण पाण्डेय ने बताया कि सांसद डॉ. भारती शियाल और राजेंद्रसिंह राणा पूर्व सांसद, भावनगर द्वारा 'वन–वीक–वन–लैब' कार्यक्रम का उद्घाटन प्रस्तावित है। कार्यक्रम के दौरान रोचक विषयों पर विभिन्न व्याख्यानों का आयोजन किया गया, जिसमें पुलिस अधीक्षक, भावनगर द्वारा 'साइबर सुरक्षा' पर विशेष व्याख्यान भी शामिल है।

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Gujarat Vaibhav

‘One Week One Lab’ events hosted by NEERI from April 8 to 13 inaugurated in Nagpur

CSIR-NEERI

08th April , 2023

Nagpur: “Scientists always advocate sustainable development in research. But if this sustainable research is not affordable or readily available, then the research is not feasible for the general public,” asserted the Secretary of the Union Science and Technology Department, Dr S. Chandrasekhar and appealed to the scientists to include the cost-effectiveness factor in their research.

Dr Chandrashekhar was speaking after inaugurating the contact program ‘One Week One Lab’ organized by the Council of Scientific & Industrial Research- National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur, on Saturday. The event is being organised from April 8 to April 13. Director of NEERI Dr. Atul Vaidya was mainly present on this occasion.

Dr Chandrasekhar said that today technologies like artificial intelligence, machine learning, Chat-GPT have posed a challenge to the scientific community and the scientific community needs to be vigilant about the effects of such technologies on human beings or their misuse and should do more research. Stating that ethics is the most important in science, he explained that scientists should be alert and aware of the misunderstandings and wrong information

about science and technology spread on the social media today. “The ‘One Week One Lab’ program should not be just for a week but should be an ongoing process,” he said and appealed that scientists should take some time out of their time to educate students in government schools about how science can change their lives. “Science will gradually grow and in 40 years it will be completely transformed. Therefore, scientists should also think about how science and technology will remain relevant in the future”, he stressed.

Dr Chandrashekhar also urged that all institutes under CSIR funded by the Department of Science and Technology and the NEERI should contribute primarily to environment and net zero carbon emission.

On this occasion, in his introductory speech, the Director of NEERI, Dr. Atul Vaidya informed the audience about NEERI’s research work. He said that the purpose of the ‘One Week One Lab’ initiative is to understand the environmental needs of the industry and society by interacting with all stakeholders related to the environment.

Dr. S. Chandrasekhar also inaugurated the Centre of Excellence set up to study climate change in Vidarbha and the effects of thermal power projects.

On this occasion, NEERI scientist Dr Sadhana Rayalu gave information about NEERI’s Centre for Environmental Change. She said that through this centre is sponsored by the Central Department of Science and Technology, research will be done mainly in the climate change of the pollution emitted in the thermal centre of Vidarbha. The vote of thanks for this program was also done by Dr. Rayalu.

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Nagpurtoday

NGRI scientists find Rare Earth Elements in Ananthapur district of Andhra Pradesh

CSIR-NGRI

08th April , 2023

Scientists at the CSIR-National Geophysical Research Institute (NGRI) in Hyderabad have found the presence of Light Rare Earth Elements (REE), key components in many electronic devices and various industrial applications, including medical technology, aerospace and defence, in Ananthapur district of Andhra Pradesh.

The Light Rare Earth Element minerals include Lanthanum, Cerium, Praseodymium, Neodymium, Yttrium, Hafnium, Tantalum, Niobium, Zirconium, and Scandium.

"We found strong anomalous (enriched) Light Rare Earth Elements (La, Ce, Pr, Nd, Y, Nb and Ta) in whole rock analyses, confirming the minerals hosting these REE," senior principal scientist in NGRI Dr P V Sunder Raju told PTI.

Rare Earth Elements (REE) are 15 elements referred to as the lanthanide and Actinide series in the periodic table of elements, together with scandium and yttrium.

REEs are key components in many electronic devices we use daily (like cell phones) and various industrial applications, including medical technology, clean energy, aerospace, automotive and defence.

He said manufacturing permanent magnets is the largest and most important end use for REEs.

Permanent magnets are essential to modern electronics used in cell phones, televisions, computers, automobiles, wind turbines, jet aircraft and many other products. Because of their luminescent and catalytic properties, REEs are widely used in high technology and "green" products.

"To reach net zero, Europe will require up to 26 times the amount of rare earth metals in 2050 compared to present demand. Demand is also increasing because of digitalisation," he said.

The discovery of the REEs was part of a study funded by the Council of Scientific and Industrial Research (CSIR-India) under a project called SHORE (Shallow subsurface imaging Of India for Resource Exploration).

Sunder Raju said the scientists had a multi-disciplinary approach to the SHORE project.

"Under this project umbrella, our focussed objective was 'Detailed understanding of RM (Rare Metals)-REE metallogeny, assessment of resources and identifying economically potential sites, especially from the carbonatite-syenite complexes of Andhra Pradesh'," he said.

Following the discovery of the REEs, deep drilling for more than at least one km will ascertain the consistency of REE presence in depth, he added.

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Tribuneindia

Sodium-Ion Batteries Offer Sustainable Energy Solutions

CSIR-NCL

06th April , 2023

Current commercial Lithium-Ion Batteries (LIBs) require the extraction of rare minerals, such as cobalt and lithium, which can have significant environmental impacts.

Sodium-Ion Batteries (SIBs) have the potential to offer a more sustainable, cost-effective, and safe alternative to lithium-ion batteries. A research group at CSIR-National Chemical Laboratory (NCL), Pune, has come closer to developing SIBs that can be commercialised.

Along with offering sustainability, SIBs provide a lower cost per kilowatt-hour, which could make them attractive for large-scale energy storage applications. However, for the development of scaled-up products and wider commercialization of SIBs, it is crucial to understand core components from the point of material science, chemistry and electrochemistry. The study looked into recent optimization strategies for each element of SIBs, i.e., electrodes, electrolytes, and binders.

“This is a review article and as per our study of literature and our own experience of building a sodium ion battery prototype, a judicial selection of electrode materials, electrolytes, and interfaces are crucial for safe, high-power, and long-lasting sodium-ion batteries. Different strategies are summarized in the review,” informs the team while speaking to India Science Wire. Currently, the limited supply of precursors and the cost of LIBs have called for research and development interest in SIBs. Due to differences in the chemistry of Li and Na, optimized methods for LIBs cannot be blindly applied to develop SIBs. The judicial selection of electrode materials, electrolytes, and interfaces are crucial for safe, high-power, and long-lasting

batteries. Additionally, sodium is the fourth-most abundant element on Earth. A low-cost Aluminium current collector can be used at both the anode and cathode side, which does not alloy with Na metal. It is also lighter than Copper, which is used as the current collector in LIBs. Also, SIBs are safe to transport at 0 V as opposed to LIBs. They offer high power and charge fast.

SIBs are promising alternatives in cost and electrochemical performance for the grid-storage application. With thorough optimization of every component, their electrochemical performance can be enhanced to meet large-scale energy storage. In their review, the researchers have dealt with the challenges faced in commercializing SIB full cells. Subsequently, they have also explored strategies to improve the energy density of SIB full cells through electrode modifications and electrolyte engineering.

The study team comprised Poonam Yadav, Apurva Patrike, Kundan Wasnik, Vilas Shelke, and Manjusha Shelke.They have also incorporated an official CSIR-NCL spin-off company Rechargion Energy Pvt. Ltd to commercialize the SIBs.

The study has been conducted with funding supports from the ARAI accelerator grant, the Council of Scientific and Industrial Research (CSIR) and the Department of Science and Technology (DST). An article based on the study's findings has been published in Materials Today Sustainability. (India Science Wire).

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