

CSIR in Media



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IITR scientist gets 3-crore fellowship

CSIR-IITR

4th July 2017

For his research work in the field of DNA repair, a senior scientist of the Indian Institute of Toxicology Research, Amit Kumar, has been awarded Wellcome-DBT-Intermediate Fellowship (IF) 2016. The fellowship is a joint initiative of the department of biotechnology, India, and Wellcome Trust, UK, that will provide funding of Rs 3.14 crore for research in the field of biomedical sciences.

"This is for the first time that a scientist from CSIR labs in Lucknow has been awarded this prestigious fellowship. The research conducted by senior scientist Amit Kumar is expected to come up with findings that may help in drug discovery for diseases like cancer and premature ageing," said IITR director Alok Dhawan. "This fellowship is a dream of every scientist as all the renowned scientists have got it," said Kumar. The fellowship covers 100 countries of the world and nurtures excellence in the field of biomedical sciences.

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[TOI](#)

Low-grade coal nanoparticles can power supercapacitors: Study

CSIR-NEERI

2nd July 2017

Nanoparticles derived from low-grade coal from northeast India can be used to make supercapacitors -- devices that can store tremendous amount of energy, say Indian researchers.

This will also help reduce imports leading to further economic development, they aver.

To utilise the reserves of low-grade coals which can't be harnessed directly in power plants, a team of scientists led by Binoy K. Saikia from the Council of Scientific and Industrial Research-North East Institute of Science & Technology (CSIR-NEIST), Jorhat, Assam, developed a process for converting the coal feedstock into carbon nanosheets.

"These nanosheets were utilised as supercapacitor electrode materials, which is a high-performance energy storage device. Our process is low-cost, easy and has eco-friendly aspects," Saikia told IANS.

Supercapacitors are some of the best devices for delivering a quick surge of power and are noted for excellent abilities to store and discharge energy.

Supercapacitors or ultra capacitors are also used in high-end cars, luxury buses, high-speed trains, heavy-lifting cranes and speedy elevators in tall skyscrapers as regenerative braking, short-term energy storage.

Northeast India has vast reserves of low-grade coal that are typically different and cheap as compared to coal from other part of the country.

"Because of its high sulphur content, this coal cannot be directly utilised in power plants. It needs beneficiation and value addition," said Saikia, of CSIR-NEIST's Polymer Petroleum and Coal Chemistry Group, Materials Science and Technology Division.

"We have been working on value addition of low-grade northeast Indian coal into high-value materials like humic acid (soil conditioner), carbon nanomaterials, nano-composite and the like."

He said the idea is to reduce dependency on imports.

"The world market for supercapacitors has been growing rapidly and India has been importing this energy device. If the abundantly available low-grade coal could be a source of supercapacitor electrode materials, there will be import substitution leading to economic development of India," he said.

The total addressable market for supercapacitors in India is 1.3 billion units by 2020. In defence applications, the market size is projected to be between Rs 20 crore to Rs 50 crore over the next four years.

Significant yield of supercapacitor electrode materials can be obtained from coal to make a device of more than 125 Farad/gram capacity, said Saikia.

"The energy storage capacity of the supercapacitor (driven by the low-grade coal nanosheet) is one lakh times higher than the capacitor used in any domestic electronics such as ceiling fan, motors etc."

The research is part of a study published in the journal Microporous and Mesoporous Materials in June. Tonkeswar Das, Himani Chauhan, Sasanka Deka, Shanky Chaudhary and Ratan Boruah are the co-authors.

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[Business Standard](#)

Srinagar: Exhibition of Centrally sponsored schemes

CSIR

4th July 2017

A mega exhibition sponsored by the Ministry of Agriculture was held at the Sher-i-Kashmir International Conference Centre (SKICC) for four days in Srinagar recently.

The exhibition was held with the objective of promoting agriculture research, science, technology, research, development, information technology, communication, biotechnology, industrial development, innovation, crafts, culture, government schemes and programmes.

This exhibition provided a platform for science and technology lovers,

farmers, traders, industrialists and students to interact with policy makers, scientists and researchers to give a glimpse of experiments, researches in various fields.

ISRO (Indian Space Research Organization), ICAR (Indian Council of Agriculture Research), Ministry of Railways, Ministry of AYUSH, ICMR (Indian Council Of Medical Research), CSIR (Council of Scientific and Industrial Research), ICAR (Indian Council of Agriculture Research) and many more institutions participated in the event.

The vision of the exhibition is to create an interactive platform and multiply the messages for development of the society. It intends to uplift the section from grassroots by not only spreading science amongst the masses but tourism, railways, agriculture, medical, skill development, handlooms and handicrafts.

To encourage the young minds, a pavilion has been set up, where students from various schools have displayed their innovative models and ideas.

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GWMC to procure equipment to tackle garbage menace

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Taking a decisive step to pull out local bodies from complaining on paucity of funds to purchase and maintain machineries, the Goa Waste Management Corporation (GWMC) has decided to purchase and provide sophisticated equipments to the local bodies for a short period to help them to provide basic services.

“We have decided to purchase machineries like tree mulcher, styrofoam compacters, shredder, grinder machines and all other tools to help tackle the mounting garbage menace and also for carrying out pre and post monsoon works effectively. This machineries will be managed by the waste management cell of the

corporation”, the official said.

The meeting which was held on Monday was attended by its members including managing director Levinson Martin who is also the chief executive officer and ex officio secretary of the corporation.

In yet another decision taken by the corporation it was decided to approve the contract of National Environmental Engineering Research Institute (NEERI) to conduct EIA study on the proposed Common Bio-medical Waste Treatment and Disposal Facility (CBWTF) at Kundaim industrial estate.

The project will be implemented under a DBFOT (design, build, finance, operate and transfer) pattern in the public-private participatory mode.

The board has also decided to propose to the government to enhance the capacity of the solid waste management facility at Calangute/Saligao from its existing 125 tonnes to 250 tonnes of handling waste. The solid waste management plant has adopted the waste-to-energy technology and recently started supplying power (green energy) to the state power grid.

In view of Chief Minister Manohar Parrikar announcement in his annual budget, to make the state garbage-free by 2020, the corporation has resolved to propose land acquisition to start garbage treatment plant in the industrial area of Verna Industrial Estate.

In order to recover the land at various dumping grounds by adopting suitable technology, the Goa Waste Management Corporation (GWMC) has also decided to invite tenders for clearing the dump site.

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గిద్దలూరు సమీపంలో రిజర్వాయర్

● తాగునీటికి ఎన్జీఆర్ఐ ప్రతిపాదన ● ఆధ్యయన నివేదిక కలెక్టర్ కు అందించిన శాస్త్రవేత్తలు ● సాధ్యాసాధ్యాలపై కీలక అధికారులతో చర్చ

ఒంగోలు, ఆంధ్రజ్యోతి : గిద్దలూరు సమీపంలో రిజర్వాయర్ నిర్మించడం ద్వారా ఆ పట్టణ పరిసర ప్రాంత ప్రజల దాహార్తి తీర్చడంతో పాటు భూగర్భజలాల పెంపునకు ఉపకరిస్తుందని నేషనల్ బయాలజికల్ రిసెర్చ్ ఇనిస్టిట్యూట్ (ఎన్జీఆర్ఐ) శాస్త్రవేత్తలు ప్రతిపాదిస్తున్నారు. ఆ మేరకు తమ సంస్థ ఆధ్యయనం చేసి రూపొందించిన నివేదికను ఎన్జీఆర్ఐ శాస్త్రవేత్తల బృందం గురువారం కలెక్టర్ వినయ్ చంద్ ఇతర అధికారులకు అందజేశారు. జిల్లాలో పదమూడు మండలాల్లో భూగర్భజలం దారుణంగా పడిపోయినట్లు గత ఏడాది ప్రభుత్వ పరిశీలనలో వెల్లడైంది. అందులో గిద్దలూరు మండలంలో కూడా ఉండగా ఆ పట్టణంతో పాటు పరిసర ప్రాంత గ్రామాల్లో తాగునీటికి తీవ్ర ఇక్కట్లు ఏర్పడ్డాయి. ఈ పరిస్థితుల్లో

ఎగువన ఉన్న కొండప్రాంతాల నుంచి వచ్చే నీటిని ఎక్కడ, ఏ తరహాలో నిల్వ చేయాలి, భూ మిలోకి నీరు ఇంకి ఏ ప్రాంతంలో భూగర్భ జలంగా మారుతుంది అనే అంశాలను ఆధ్యయనం చేసి నివేదించాలని ఏడాది క్రితం అప్పటి కలెక్టర్ సుజాత శర్మ ఎన్జీఆర్ఐకి లేఖ రాశారు. తదనుగుణంగా ఆ సంస్థ శాస్త్రవేత్తల బృందం పలుమార్లు గిద్దలూరు ప్రాంతాన్ని సందర్శించడంతో పాటు శాస్త్రీయ పద్ధతులలో ఆధ్యయనం చేశారు. తాము పరిశీలించిన అంశాలను నివేదిక రూపంలో ఆ సంస్థ శాస్త్రవేత్తలు సి.నగేష్, నందన్లు గురువారం కలెక్టర్, ఇతర అధికారులకు అందించారు. ద్వైమా పీడి కార్యాలయంలో కీలక అధికారులైన పీడి పోలప్ప, జలవనరుల శాఖ ఎస్ఈ శారద, ఆర్డబ్ల్యుఎస్ ఎస్ఈ సంజీవరెడ్డి, భూగర్భజలశాఖ డీడీ

మల్లేశ్వరరావు తదితరులతో భేటీ అయ్యి వివరించారు. అనంతరం రాత్రికి కలెక్టర్ వి.వినయ్ చంద్ ను కలిసి నివేదికను అందించడంతో పాటు ప్రాధాన్య అంశాలను ఆయనకు వివరించారు. ఆ నివేదిక సారాంశం పరిశీలిస్తే గిద్దలూరుకు ఎగువ ప్రాంతంలో ఉన్న రెండు కొండల మధ్య నుంచి వచ్చే వర్షపు నీటిని నిలుపుకొని రిజర్వాయర్ గా మార్చు చేస్తే ఒక వైపు భూగర్భజలం పెంపు, మరో వైపు తాగునీటికి నేరుగా కాలువలు లేదా ఫైపులైన్ ద్వారా ఇచ్చే అవకాశం ఉంటుందని, గిద్దలూరు సమీపంలో సామాజిక అటవీశాఖ అధీనంలో ఉన్న 240 ఎకరాల్లో రిజర్వాయర్ ఏర్పాటుకు అనుకూలమైనదని నివేదికలో పేర్కొన్నారు. దీనిపై జిల్లా అధికారులు ఓ నిర్ణయం తీసుకుని ప్రభుత్వం దృష్టికి తీసుకెళ్ళే అవకాశం ఉంది.

गिदलूरु के निकट जलाशय

CSIR-NGRI

30th June 2017

- पेयजल के लिए एनजीआरआई का प्रस्ताव
- वैज्ञानिकों ने दी कलेक्टर को अध्ययन की रिपोर्ट
- साध्यासाध्यों पर मुख्य अधिकारियों के साथ चर्चा

ओंगोलु, आँध्रज्योति: राष्ट्रीय भूभौतिकीय अनुसंधान संस्थान (एनजीआरआई) के वैज्ञानिकों ने प्रस्ताव किया कि गिदलूरु के निकट जलाशय का निर्माण करके उस शहर के आस-पास के इलाकों के लोगों के लिए पेयजल उपलब्ध किया जा सकता है और साथ में भूजल के स्तर में भी बढ़ोत्तरी की लायी जा सकती है। अपने संस्थान द्वारा इसपर किए गए अध्ययन की रिपोर्ट को एनजीआरआई वैज्ञानिक दल ने गुरुवार को कलेक्टर विनयचंद तथा अन्य अधिकारियों को प्रस्तुत किया। जिले में तेरह मंडलों में भूजल स्तर बहुत नीचे जाने के बारे में पिछले साल सरकारी अध्ययन में उजागर हुआ। उन मंडलों में गिदलूरु मंडल भी है जिसके चलते उस शहर के साथ-साथ आस-पास के गांवों में पेयजल के लिए बहुत दिक्कत हुई। ऐसे में ऊपरी पहाड़ी इलाकों से आने वाले पानी को कहाँ, किस तरह से संचित करना है, पानी जमीन में सोखकर कौन से इलाके में भूजल के रूप में परिवर्तित होता है - इन विषयों पर अध्ययन करके रिपोर्ट देने के लिए उस समय के कलेक्टर सुजाता ने एनजीआरआई को पत्र लिखा। तदनुसार संस्थान के वैज्ञानिक दल ने कई बार गिदलूरु इलाके का दौरा किया और वैज्ञानिक तरीकों का प्रयोग करके अध्ययन किया। संस्थान के वैज्ञानिक श्री नगेश, नंदन ने अपने अध्ययन के विषयों को रिपोर्ट के रूप में गुरुवार को कलेक्टर, अन्य अधिकारियों को प्रस्तुत किया। ड्वामा पीडी कार्यालय के मुख्य अधिकारी पीडी पोलप्पा, जल स्रोत विभाग एसई शारदा, आरडब्ल्यूएस एसई संजीव रेड्डी, भूजल विभाग डीडी मल्लेश्वर राव आदि से बैठक करके उक्त विषयों को स्पष्ट किया। उसके बाद, रात में

कलेक्टर विनयचंद से मुलाकात करके रिपोर्ट की प्रमुख बातों को उन्हें समझाया। उस रिपोर्ट के सारांश को देखें तो पता चलता है कि गिदलूरु के ऊपरी हिस्से में स्थित दो पहाड़ों के बीच से आने वाले वर्षा जल को संचित करके यदि जलाशय के रूप में बदल दिया जाए तो एक ओर भूजल की बढ़ोत्तरी, दूसरी ओर पेयजल के लिए सीधे नहर या पाइपलाइन के जरिए उपाय किया जा सकता है और इस जलाशय निर्माण के लिए गिदलूरु के निकट सामाजिक वन विभाग के नियंत्रण में जो 240 एकड़ जमीन है, वह अनुकूल है। इन विषयों पर जिला अधिकारी गण एक निर्णय करके सरकार के ध्यान में ले जाने की संभावना है।

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