



# CSIR-NML NEWSLETTER JUNE- 2021

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JULY 13, 2021

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CSIR-NML, JAMSHEDPUR  
RESEARCH PLANNING & BUSINESS  
DEVELOPMENT DIVISION

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## SUMMARY OF SIGNIFICANT ACTIVITIES

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*For the period June,2021, CSIR-National Metallurgical Laboratory*

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### 1. Technology Development (New Product/Process Technologies)

S.No.	Title
1.	FOBOP: Fibre Optic based Break Out Prediction technology for Billet Caster (TRL:8) Inventor: Tarun Kr Das, Chandan Dutta, Alok Kumar, S Palit Sagar, Team CGCRI, Team TSL
2.	A Process to improve the corrosion resistance of steel rebar (TRL 6) Inventor: Ashok Kumar Mohanty, Sharma Paswan
3.	A Process to clear ball jam in ball pen tips (TRL 6) Inventor: Ashok Kumar Mohanty

### 2. Agreement(s) Signed

Nil
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### 3. Patent(s)/Copyright(s) Filed

S.No.	Title
1.	Synthesis of biomass-derived heteroatom-doped porous graphitic carbon and metal phosphides/oxides/sulphides based composite for energy storage application Notification No: NML/PAT 0606/2021/IN; Funding Project: OLP-0375; Inventors: Pallab Bhattacharya and Nisha Gupta

### 4. S&T services that have created a national/visible impact

#### **2 BENEFICIATION STUDIES ON LOW GRADE MANGANESE ORE FROM TATA STEEL**

Manganese ore is an important material used for majority of steels. Majority of the manganese ore (~95%) produced is used for Iron & Steel making with remaining 5% by other industries such as battery, chemical, paint etc. With depletion of high grade manganese ores there is need to exploit low grade manganese ore resources. Low grade ores generally contain high proportion of impurities such as Fe, silica, phosphorous etc. and are finely disseminated. Such ores need comminution to fine sizes and elaborate beneficiation for improving manganese content and reducing the impurities in the concentrate to be used for manganese making through agglomeration. M/s Tata Steel Ltd, Jamshedpur has been interested towards developing beneficiation process for low grade manganese ore resources and dump fines. In this connection they initiated collaborative project with CSIR-NML to undertake characterization and bench scale beneficiation towards developing process flow-sheet. It was proposed to carry out the characterization, bench scale beneficiation

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studies involving determination of physical, chemical and mineralogical characteristics, beneficiation by different techniques and development of process flow-sheet. As desired by Tata Steel the primary objective of the present study was to explore the possibility of developing a process flow-sheet for beneficiation of low-grade manganese ore assay with Mn 28% Mn and a reject containing <10% Mn. However, one of the sample received at CSIR-NML contain 34.56% Mn which was processed for possible upgradation of Mn content

#### 5. Details of important Workshop(s)/Symposia(s)/Conference(s)/Training Course(s)/ Meeting(s) Organized

- **Societal Skill Training Program (4th June - 4th August 2021)**

The training "Industrial R&D Training on Materials & Metallurgical Engineering" has been organized by CSIR-NML for Graduate Students. More than 150 participants are expected to be a part of this program during the entire duration of the program.

- **Scientists and Science Teachers Conclave**

The training "Scientists and Science Teachers Conclave 2" was organized by CSIR-NML for Graduate Students. 120 participants attended this course of 4 days.

#### 6. Details of any New Facilitie(s)

- **Muffle Furnace**

Make- GEW Model No.- MF -1000; Muffle furnace is ideal for many laboratory applications . The heating elements are encased in quartz glass tubes making them reliable partners for a variety of needs.

#### 7. Details of any outstanding Honor(s)/Award(s) received by the staff

Nil

#### 8. Any other items considered to be significant

- **Webinar on Post Covid Heart Care**

Dr. Ajay Agarwal (Cardiology), Affiliation: Brahmananda Narayana Multispeciality Hospital(A unit of Narayana Health)delivered a webinar on Topic: "Post Covid Period Heart Care" for CSIR-NML on 25<sup>th</sup> June 2021.



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Ms. Prabha Srinivasan, PS; Mr. Sarathi, Multi Tasking Staff; and Mr. Duryodhan Das, Laboratory Assistant superannuated from CSIR-NML on 30<sup>th</sup> June 2021.



• **Sad Demise of Staff**

Mr. Dileshwar Behera, Lab Attendent passed away on 15th June 2021.



• **Covid-19 Vaccination Drive @CSIR NML**

The Welfare Committee (s) of CSIR-NML organized Covid Vaccination camps for the staff and staff families of the laboratory. A large number of beneficiaries were given first /second doses of the vaccine in two rounds of the drive. Further, the camps are planned to be organized in a regular fashion to cover the entire staff and their families, who are not vaccinated yet.



आ.एन.एल. पब्लिशिंग संस्थान - 80 3358-80 जमशेदपुर, सीडार, 27 जून 2021 एवं - 41 ओर - 1.301 मूल - 3.000 पृष्ठ - 12

## एनएमएल फ्लैट्स एग्रिको में टीकाकरण अभियान का आयोजन



**जमशेदपुर :** झारखंड सरकार द्वारा संचालित कोविड वैकसीनेशन मोबाइल टीम को सहयता से कोविड टीकाकरण अभियान के दूसरे चरण में राष्ट्रीय स्वास्थ्य प्रयोगशाला (एनएमएल) के 45 चर्च से अधिक उम्र के कर्मियों, निवृत्तों एवं उनके संबंधियों के लिए एनएमएल फ्लैट्स एग्रिको में 50 लोगों का सफलतापूर्वक टीकाकरण किया गया. इस टीकाकरण अभियान को सफलतापूर्वक अंजोसित करने में ज्योति कुमार, वेद प्रकाश, परमेश सुपन, कृष्ण कुमार, सरोज कुमार, अशोक कुमार सिंह, सी. सुमनमय, डॉ. अरविंद सिंह, डॉ. डी निखा, डॉ.के. हासदा, राजेश चवन श्रीवास्तव तथा वैद्यकीय विपदों का उद्देश्यीय योगदान रहा.

## एनएमएल के कर्मियों व परिजनों को लगा टीका



**जमशेदपुर.** एनएमएल में टीकाकरण अभियान चलाना गया. इसमें एनएमएल के ऐसे कर्मियों, जिनकी आयु 45 साल से अधिक है, उन्हें टीका लगाया गया. मंगलवार को कुल 25 लोगों ने टीका लगवाया. इसमें सेंट्रल वेलफेयर समिति के अध्यक्ष डॉ. अरविंद सिन्हा, गोलपुरी वेलफेयर समिति के अध्यक्ष डॉ.डी.मिश्रा, सचिव डॉ.रंजना, एग्रिको वेलफेयर समिति के अध्यक्ष डॉ.केएल हांसदा, सचिव कृष्णा कुमार, वॉरंट चिकित्सक पर्याधिकारी डॉ. अरविंद कुमार आर्य, कुमार शूल समेत अन्य मौजूद थे.

## • Tree Plantation Program (21st-26th June 2021)

On the occasion of International Yoga Day under the aegis of Town Official Language Implementation Committee (TOLIC), Jamshedpur, CSIR-NML, Jamshedpur organized the Tree Plantation Week function from 21st to 26th June, 2021. A number of trees were planned in all campuses of the laboratory.





· **Invited Talk Delivered by Staff**

CSIR-IMMT has initiated an incubation center -InTEC (Innovation and Technology Enabling Centre) recently. As part of the sensitization activities of this center, CSIR-IMMT organized a one-week National e-Workshop on Innovation and Intellectual Property Rights (NeW IPR-2021) from June 14-19, 2021. In this regard, a talk titled "Make IP India" was delivered on 19th June 2021 by Mr. Sudhakara Rao K, Technical Officer, CSIR-NML.

**One Week National e-Workshop on Innovation & Intellectual Property Rights (NeW IPR-2021), June 14 - 19, 2021**  
 CSIR-Institute of Minerals & Materials Technology, Bhubaneswar, India  
 URL: www.immt.res.in

**Organizing Structure**

**PATRON**  
 Prof. Sudhasatwa Basu  
 Director, CSIR-IMMT

**CO-PATRON**  
 Dr. Ashok K Sahu  
 Chief Scientist & CEO-InTEC  
 Dr. B S Jena  
 Chief Scientist  
 Head-PME

**CONVENER**  
 Dr T Pavan Kumar  
 Senior Scientist & Manager-InTEC

**Virtual - MS-Teams**  
 4 Sessions a day (2 FN & 2 AN)

**Lectures Interactions Hands-on Exercises**

**e-Support CNeM CSIR-IMMT**

**Inaugural June 14, 2021 10:00 – 11:00 AM**

**CHIEF GUEST**  
 Dr. Premnath Venugopalan  
 Chief Scientist & Head, NCL Innovation, CSIR-NCL & Director, Venture Centre, Pune

**Inaugural talk INTELLECTUAL PROPERTY & INNOVATION**

**Experts from:**

**DAY 6 June 19, 2021**  
 10:00-11:00 AM

**FORENOON (FN)**  
**Make IP INDIA**  
 Mr Sudhakara Rao  
 IP Enthusiast  
 CSIR-NML, Jamshedpur  
 12:00-1:00

**NeW IPR LEARN**

**9. Scientific & Technical Services rendered**

During this period the following industrial houses viz. M/s. Graphene Research Lab Pvt Ltd , M/s. NHPC LIMITED, Jammu and Kashmir , M/s. Sunflag Iron & Steel Company Limited , M/s. Bharat Coking Coal Ltd., , M/s. Core Engineers & Consultancy Services, , M/s. Hinduja National Power Corp. Ltd. Mumbai , M/s. Indian Testing Laboratory, Noida , M/s. Inspectorate Griffith India Pvt. Ltd., , M/s. Lalitpur Power Generation Comp. Ltd., UP , M/s. Madras Metallurgical Services Pvt. Ltd. , M/s. Mounika Tradesr, Bellary , M/s. NTPC Limited, Bijapur , M/s. P. Seenappa Setty & Son, Bellary , M/s. PIBCO LTD. New Delhi , M/s. Rashmi Cement Limited, Jhargram , M/s. TECHBOLT Industries Pvt. Ltd., Raigad , M/s. Uttar Pradesh Rajya Utpadan Nigam Ltd , M/s. RDSO Lucknow , M/s. South eastern Coalfields Ltd. Bilaspur , M/s. Tata Steel Limited, Jamshedpur , received technical and scientific support from NML in the area of chemical analysis and physical test of their raw materials and finished products.

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## 10. ECF Details

**External Cash Flow (ECF) Status during: 01-06-2021 TO 30-06-2021:**

Category	TOTAL (Figures in Rs. Lakh)
Sponsored R&D	75.82834
Grant-in-Aid R&D	0
R&D Consultancy	0
Technical Services	8.39828
Collaborative/ Cooperative R&D	0
Premia/Royalty	0
<b>TOTAL</b>	<b>84.22662</b>



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END OF NEWSLETTER

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