



# 1<sup>st</sup> International Symposium on Materials for Sustainable Development

December 20-21, 2024



Chief Guest  
**Dr. Siddhartha Misra**  
*Chief Process Research*  
Tata Steel Research & Development



Plenary Speaker  
**Prof. J. Ramkumar**  
*Professor*  
IIT Kanpur, India



Plenary Speaker  
**Prof. K. V. L. Subramaniam**  
*Professor*  
IIT Hyderabad, India



Invited Speaker  
**Prof. Reyes Garcia**  
*Associate Professor*  
The University of Warwick, UK



Invited Speaker  
**Prof. Vipul Sharma**  
*Assistant Professor*  
University, of Turku, Finland



Invited Speaker  
**Prof. Sudharshan N. Raman**  
*Associate Professor*  
Monash University, Malaysia



Invited Speaker  
**Dr. Georgy I. Lazorenko**  
*Director of the Center*  
NSU Climate Center, Novosibirsk  
State University, Russia



Invited Speaker  
**Prof. U. Johnson Alengaram**  
*Professor & Director,*  
Centre for Innovative Construction Technology  
University of Malaya, Malaysia



Invited Speaker  
**Sri P. S. Bagga**  
*Director*  
Supreme Metallurgical Services



Invited Speaker  
**Prof. Prakash Nanthagopalan**  
*Professor*  
IIT Bombay, India



Invited Speaker  
**Prof. Suhrit Mula**  
*Professor*  
IIT Roorkee, India



Convener & Speaker  
**Prof. Boksun Kim**  
*Associate Professor*  
University of Plymouth, UK



Convener  
**Prof Sandeep Chaudhary**  
*Professor*  
IIT Indore, India



Convener & Speaker  
**Prof. Vinod Kumar**  
*Associate Professor*  
IIT Indore, India



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## December 20, 2024

8:00 AM Breakfast and registration desk open Central Dinning Facility

9:40 AM Inaugural Session and Welcome LRC Seminar Hall

10:00 AM Inspiring Researchers through Industry Perspective on Sustainability LRC Seminar Hall

10:00 AM “Decarbonizing Steel Industry - one molecule at a time”, **Dr. Siddhartha Misra**

11:00 AM “Sustainable imperative in material selection”, **Prof. Vinod Kumar**

11:40 AM “Sustainable materials, architectures and fabrication for next-generation electronics” **Prof. Vipul Sharma**

12:30 PM “Sustainable processes and technologies in iron / steel making”, **Shri P.S. Bagga**

1:00 PM Lunch Central Dinning Facility

2:30 PM Future of Sustainable Concrete Construction LRC Seminar Hall

2:30 PM “Emerging Materials & Improvements in Processing for Sustainable Concrete Infrastructure”, **Prof. K.V.L. Subramaniam**

3:30 PM “Recycled Aggregate Concrete in Southeast Asia”, **Prof. Boksun Kim**

4:15 PM “Atomic-Level Insights into the CO<sub>2</sub> Mineralization Mechanism on Lizardite”, **Dr. Georgy Lazorenko**

5:00 PM Tea Break LRC Seminar Hall

5:15 PM “Ultra-high-performance concrete (UHPC): transitioning towards sustainability”, **Prof. S. N. Raman**

6:00 PM “Confinement of normal & RAC elements with Post-Tensioned Metal Straps”, **Prof. Reyes Garcia**

7:00 PM Banquet Dinner Central Dinning Facility

## December 21, 2024

8:00 AM Breakfast Central Dinning Facility

9:45 AM Insight for Researchers on Materials for Sustainable Development LRC Seminar Hall

9:45 AM “Sustainability approach towards near net shaping of exotic materials”, **Prof. J. Ramkumar**

10:45 AM “Advanced Metallic Materials: Processing and Characterization”, **Prof. Suhrit Mula**

11:30 PM “From Futile to Functional: Exemplification of Sustainable Materials in the Construction of Low-Cost Model House, and Development of Blast Resistant Concrete”, **Prof. U. Johnson Alengaram**

12:15 PM “Sustainability at construction sites – A myth or reality?”, **Prof. Prakash Nanthagopalan**

1:00 PM Lunch Central Dinning Facility

2:30 PM Oral presentations from the Researchers of Tomorrow LRC Seminar Hall

2:30 PM Oral presentations

5:15 PM Tea Break LRC Seminar Hall

6:00 PM Closing ceremony and prize distribution LRC Seminar Hall