

i-PSG MS Teams Meeting: Presentation list
(Date: October 21-22, 2021; Time: 2 PM onwards)

[A] Thematic Research Project: Completed, On-going and New Proposals (10 min presentation followed by 5 min discussion)

Sl. No.	Project No.	Status	Title of the project	Start date	End date	PL
1.	OLP-0382	Completed	Effect of deformation induced martensite and dislocations density on the hydrogen permeation and hydrogen embrittlement of austenitic steels	16-10-20	15-10-21	G. Sudhakar Rao
2.	OLP-0383	Completed	Discerning the individual and synergistic effect of carbide inhibitors on austenite retention and stability in medium manganese advanced high strength steels	16-10-20	15-10-21	Avanish K. Chandan
3.	OLP-0384	Completed	Neural network-based sensitivity analysis and performance optimization of carbon recovery from Blastfurnace and Corex plant sludge of JSW Steel plant using froth flotation - A step towards Waste-to-Wealth management	16-10-20	15-10-21	Ajita Kumari
4.	OLP-0385	Completed	Understanding the phenomenon and enhancement of anti-icing properties of HVOF deposited coating	16-10-20	15-10-21	Paritosh Dubey
5.	OLP-0374	Completed	Characterization of microbubbles and its subsequent application in fine particle separation	01-06-20	30-09-21	Kumari Ruby
6.	OLP-0388	On-going	Study of Amorphous magnetic alloy flakes for Microwave Absorbing Materials (2-18 GHz): Tuning magnetic permeability through flake microstructure and Morphology	01-06-21	30-11-21	M. Premkumar
7.	OLP-0389	On-going	Numerical modelling of heat transfer and fluid flow in Selective Laser Melting (SLM) of SS316L	01-06-21	31-03-22	Y. Usha
8.	OLP-0392	On-going	Multi physics and heat treatment simulation of additive manufacturing process for property prediction of SS316L	01-06-21	31-03-22	M. Madan
9.	---	New Proposal	Decarburization of high carbon ferroalloys by CO ₂ treatment	---	---	A. Ammasi
10.	---	New Proposal	Production of iron powder/iron nugget from industrial waste by the process of segregation roasting	---	---	M. Bhattacharya
11.	---	New Proposal	Feasibility study on producing DRI from lumps/pellets by using hydrogen	---	---	M. Madan
12.	---	New Proposal	Processing of glassy metal powders through gas atomization for additive manufacturing and coating applications	---	---	Rajat Roy
13.	---	New Proposal	Extraction and separation of rare earth elements through porous silica-grafted ligands	---	---	Rajen Kundu
14.	---	New Proposal	Enhancement of molten salt corrosion resistance of thermal energy storage materials in concentrated solar power plant through doping inhibitors	---	---	S. K. Pradhan

15.	---	New Proposal	Oxidation and hot corrosion behaviour studies of AMed Inconel 625 & Inconel 718 alloys	---	---	S. Paswan
16.	---	New Proposal	Development of a hybrid centrifugal separator for application in mineral processing	---	---	Sunati Mohanty

[B] Technology Development Project: Completed, On-going and New Proposals (10 min presentation followed by 5 min discussion)

Sl. No	Project No.	Status	Title of the project	Start date	End date	PL
17.	OLP-0369	On hold	Scaling up of the process for production of iron powder from waste iron oxide fines / slimes using hydrogen gas / natural gas	16-10-19	15-07-21	D. C. Sau
18.	OLP-0372	On-going	Development of melting-casting facilities and optimization of melting and casting parameters for 3 rd generation Al-Li alloys	01-12-19	31-03-22	A. P. Murugesan
19.	OLP-0393	On-going	Investigations on the NML'S retort technology for magnesium metal production	01-06-21	31-03-22	Krishna Kumar
20.	---	New Proposal	Investigate NML developed furnace compatibility with IIP bio-pellets	---	---	R. B. Meshram
21.	---	New Proposal	Upscaling of an energy efficient process for the recovery of metal values from spent NdFeB magnets	---	---	S. K. Sahu

[C] Scholastic Project: Completed, On-going and New Proposals (10 min presentation followed by 5 min discussion)

Sl. No.	Project No.	Status	Title of the project	Start date	End date	Project Leader
22.	OLP-0352	Completed	High Temperature Crack Growth of Cr-Mo Steels (Module-III)	16-10-20	15-10-21	C. V. Singh
23.	OLP-0353	Completed	Development of Functionalized MOF and its composites for the adsorption of light rare earths from effluent/dilute leach solution: Dynamic filtration studies with mass transfer modelling (Module-III)	16-10-20	15-10-21	Shivendra Sinha
24.	OLP-0354	Completed	Study of structure-property correlations of inorganic - organic hybrid geopolymers (Module-III)	16-10-20	15-10-21	Rashmi Singla
25.	OLP-0355	Completed	Studies on the physico-chemical behavior of mixture of amine (pri, sec, ter and quart amines) and organophosphoric compounds (Phosphoric, phosphonic and phosphinic acids) for the solvent extraction and separation of Li, Co, Ni and Mn (Module-III)	16-10-20	15-10-21	Swati Pramanik
26.	OLP-0345	Completed	Development of Low Carbon Bainitic Steels (Module-III)	01-06-20	30-05-21	Gaurav Kr. Bansal
27.	OLP-0387	Completed	Extraction and recovery of copper from lean grade chalcopyrite	16-10-20	15-10-21	Rajanikant Choudhari

28.	OLP-0386	Completed Module-I and New proposal	Behaviour of mold flux for high Al steels during continuous casting process (Module I: Completed) [<i>New proposal for Module-II</i>]	16-10-20	15-10-21	Bhupendra Kumhare
29.	OLP-0361	On-going	Development of high efficiency Tin Selenide based Thermoelectric and optically tunable coatings for alternative energy harvesting from different industrial applications (Module-III)	01-06-21	31-03-22	Komal Singh
30.	OLP-0378	On-going	Characterization, beneficiation and coke formation studies on low volatile coking coal for metallurgical utility (Module-II)	01-06-21	31-03-22	Mohan Rao Andavarapu
31.	OLP-0379	On-going	Determining the process route parameters of the formation of stable Face Centred Cubic Titanium (Module- II)	01-06-21	31-03-22	Vaibhav Gaur
32.	OLP-0380	On-going	Precipitation hardened compositionally complex Ni-based alloys aided with HDI strengthening (Module-II)	01-06-21	31-03-22	Shubhada Kar
33.	OLP-0390	On-going	Mitigation of galvanizability of steel surface through adoption of sol-gel pre-coating and improvement in corrosion resistance of galvanizing coating through post intercalated ion conversion method (Module I)	01-06-21	31-03-22	M. Walunj
34.	OLP-0391	On-going	Dsigning of a magneto-plasmonic grapheme material and its multimodal application in catalysis (Module I)	01-06-21	31-03-22	Sudeshana Das Chakravarty
35.	OLP-0394	On-going	Synthesis and Development of Al-Si-Cu-N Nanocomposite Coatings for Antibacterial Applications	01-06-21	31-03-22	Shweta Ghosh
36.	---	New Proposal	Development of electromagnetic sensor for real time health monitoring of structural components exposed to high-temperature (above 600°C) (Module-I)	---	---	Chandan Datta
37.	---	New Proposal	A study on hydrodynamics characteristics in separation of minerals in a monolithic flotation column (Module-I)	---	---	K. Hembrom
38.	---	New Proposal	Flow Accelerated Pipeline Corrosion: Probing the FAC mechanisms of API 5L grade steels through gravimetric and different electrochemical techniques (Module-I)	---	---	L. K. Meena
39.	---	New Proposal	Evaluation of mechanical properties across fusion boundaries of dissimilar metal welds materials using ball indentation technique and co-relate with microstructural characteristic (Module-I)	---	---	Mousumi Das

Note: All the projects with background (Sr. No. 29-35) need to submit a duly signed and scanned progress report by **11/10/2021**, positively, in the attached format.