



CSIR-INSTITUTE OF MINERALS AND MATERIALS TECHNOLOGY
ACHARYA VIHAR, BHUBANESWAR-751013

RECRUITMENT OF PROJECT STAFF

CSIR-Institute of Minerals and Materials Technology (IMMT), Bhubaneswar requires about **73 positions of Project Staff** in its ongoing projects. The interested candidates should apply online between **17-11-2018** to **01-12-2018**.

The requirement covers science subject such as **M.Sc.** in Chemistry/Physics/Material Science/Biochemistry/Plant Pathology/Plant Virology/Biotechnology/Microbiology/Geology/Vegetable Science and **B.E./B.Tech.** and **M.E./M.Tech./M.Sc. Tech.** in Electronics/Electrical/Instrumentation Engg./Metallurgy/Materials & Metallurgical Engg./ Materials Engg./Materials Science & Engg./Metallurgical & Materials Engg./Chemical /Mechanical Engg./Metallurgical/Mining Engg./Mineral Engg./ Mineral Process Engg. with /without experience and **Diploma** in Electrical/ Electronics/Instrumentation Engg./Chemical/Metallurgical/Polymer Technology/ Metallurgy/ Mechanical. Engg. and **B.Sc.** in Chemistry/ Agriculture Science and **Ph. D.** in Chemistry (Analytical/Inorganic)/Engineering.

The positions are co-terminus with the projects. For details and online application please visit website: www.immt.res.in.

Note: The shortlisted candidates will be called for an interview. The date of interview will be intimated through the email id provided by the candidates. No TA/DA will be paid for attending the interview.

Advt. No. RDPD/P37/2018

R&D PLANNING DEPT

CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY
ACHARYA VIHAR, P.O. RRL, BHUBANESWAR-751013

RECRUITMENT FOR PROJECT STAFF

Advt. No.RDPD/P37/2018

POST CODE	Project No.	Title of Project (Sponsor)	Duration of the project	Position (Number), Monthly Stipend in Rs.	Age as on Date of Interview	Essential Qualification	Job Requirement/ Desirable
1	2	3	4	5	6	7	8
1	MLP-0030	Development of cost effective industry grade non-contact type online moisture sensor using microwave and NIR, Sponsored by CSIR, New Delhi	Mar 2020	PA-I(one) 15000/-+HRA	28	Diploma in Electrical/ Electronics/ Instrumentation Engg.	Embedded Systems, Design, Circuit Design, Soldering
2	MLP-0029	Wireless thermocouple for temperature measurement of rotating and moving surfaces, Sponsored by CSIR, New Delhi	Mar 2020	PA-I(one) 15000/-+HRA	28	Diploma in Electrical/ Electronics Engg.	Circuit design/, soldering, PCB design
3	MLP-0033	Design and development of a vertical slurry transport system for lifting of minerals/ ores in heterogeneous regime Sponsored by CSIR, New Delhi	Mar 2020	PA-I(one) 15000/-+HRA	28	Diploma in Mechanical/Chemical/ Metallurgical Engg. OR B. Sc in Chemistry.	Physiochemical characterization of ores / mineral samples, sample preparation, supervision of the fabrication of the experimental setup, assisting in experimental campaigns, market survey for procurement of various engineering items as and when required and other related activities for smooth completion of the project work
4	GAP-296	Development of household defluoridation unit for safe drinking water in fluoride endemic regions, Sponsored by DST, New Delhi	Mar 2019	PA-I(one) 15000/-+HRA	28	B. Sc. in Chemistry.	Analysis of water samples
5	MLP-0039	Rapid and point care microfluidic kit for multiplex diagnosis of viral diseases in tomato and apple. Sponsored by CSIR, New Delhi	Mar 2020	PA-I(one) 15000/-+HRA	28	Diploma in Mechanical/ Polymer Technology/ Agriculture OR B. Sc in Chemistry/Agriculture Science	EDM drilling knowledge
6	MLP-0036	Processing of secondary resources for the production of battery materials, Sponsored by CSIR, New Delhi	Mar 2020	PA-I(two) 15000/-+HRA	28	B. Sc. in Chemistry Diploma in Metallurgy Engg.	Analytical chemistry and process metallurgy

7	MLP-0044	Protective conducting materials coating of $\text{La}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.2}\text{Fe}_{0.8}\text{O}_3$, MnCo_2O_4 and $\text{Mn}_{1.5}\text{Co}_{1.5}\text{O}_4$ and SOFC interconnect Crofer 22APU by electrophoretic deposition to mitigate high temperature oxidation and degradation, Sponsored by CSIR, New Delhi	Mar 2020	PA-I(one) 15000/-+HRA	28	Diploma in Electrical/Electronics/ Chemical/Ceramics/ Metallurgy or B.Sc in Chemistry /Physics.	Set-up experiments for electrophoretic deposition, prepare stable suspension, particle charge measurement
8	MLP-0053	Highly ordered functionalized nanostructured electrolytic manganese dioxide with enhanced electrochemical performance for batteries and supercapacitors, Sponsored by CSIR, New Delhi	Mar 2020	PA-I(one) 15000/-+HRA	28	Diploma in Mechanical Engg..	Running experiments followed by characterizations and data analysis
9	MLP-0038	Recovery of Nickel, Chromium and Iron from Chromite Overburden (COB) in 100kg scale, Sponsored by CSIR, New Delhi	Mar 2020	PA-I(one) 15000/-+HRA	28	Diploma in Metallurgy.	Reduction roasting, magnetic separation and smelting of COB
10	MLP-0049	Ferro Manganese production from lean grade Manganese ore. Sponsored by CSIR, New Delhi	Mar 2020	PA-I(one) 15000/-+HRA	28	Diploma in Metallurgy.	Reduction roasting, and smelting of manganese ore
11	MLP-0051	Kinetics and thermodynamics study on reduction roasting of low and lean grade iron ore using fluidized bed roaster to maximize the recovery of iron value, Sponsored by CSIR, New Delhi	Mar 2020	PA-I(three) 15000/-+HRA	28	B. Sc in Chemistry OR Diploma in Chemical/ Metallurgical/Mechanical Engg.	Chemical analysis of ores, minerals, metals, mineral processing experiments, AutoCAD drawing
12	MLP-0052	Thermodynamics and Kinetics study of ferruginous limonite reduction and smelting for production of titania slag. Sponsored by CSIR, New Delhi	Mar 2020	PA-I(one) 15000/-+HRA	28	B. Sc in chemistry OR Diploma in Chemical/ Metallurgy Engg.	Chemical analysis of ores, minerals, metals, and mineral processing experiments
13	MLP-0045	Preparation of coke and Ferro- coke from low ash non-cooking coal, Sponsored by CSIR, New Delhi	Mar 2020	PA-I(two) 15000/-+HRA	28	B. Sc in Chemistry OR Diploma in Chemical/ Metallurgy Engg.	Chemical analysis of minerals, metals, coal and coke analysis
14	MLP-0048	Dephosphorization of high phosphorus iron ore, Sponsored by CSIR, New Delhi	Mar 2020	PA-I(one) 15000/-+HRA	28	B. Sc in Chemistry OR Diploma in Chemical/ Metallurgy Engg.	Chemical analysis of ores, minerals, metals, and mineral processing experiments
15	MLP-0030	Development of cost effective industry grade non-contact type online moisture sensor using microwave and NIR, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	B. Tech in Electronics/ Instrumentation Engg.	Optical and microwave components, lab view and embedded system

16	MLP-0028	Development of an image processing based system for monitoring feed rate of materials moving on a conveyor, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	B. Tech in Electronics/ Instrumentation Engg.	Image processing, lab view, open CV and other real time image processing system and software
17	MLP-0029	Wireless thermocouple for temperature measurement of rotating and moving surfaces, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	B. Tech in Electronics/ Instrumentation Engg.	Embedded system design, Keil ARM, PCB design, industrial instrumentation, COMSOL heat transfer simulation
18	MLP-0027	Development of an induration furnace monitoring system with IoT and artificial intelligence (AI) technique in a pelletization plant, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	B. Tech in Electrical/ Electronics/ Instrumentation Engg.	Matlab, IoT, cloud computing, Big Data, artificial intelligence, embedded system
19	MLP-0040	Sensors for detection of heavy metal ion contaminations, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	B. Tech in Electrical/ Electronics/ Instrumentation Engg.	Design and fabrication of electronic circuitary
20	MLP-0053	Highly ordered functionalized nanostructured electrolytic manganese dioxide with enhanced electrochemical performance for batteries and supercapacitors, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(two) 25000/-+HRA	30	M. Sc in Chemistry.	Computation running experiments at higher scales, characterizations and data analysis
21	MLP-50	Processing of Mineral and Metallurgical wastes and flyash for their value addition (WP-III). Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	M. Sc in Chemistry.	Chemical analysis of metals
22	MLP-0034	Development of ferrite-oxide hybrid microwave absorbing materials for stealth application, Sponsored by CSIR- NAL	Mar 2020	PA-II(one) 25000/-+HRA	30	M. Sc. in Chemistry.	Carry out synthesis of hybrid oxide materials, characterization, XRD, SEM, UV, IR analysis and data interpretation
23	GAP-296	Development of household defluoridation unit for safe drinking water in fluoride endemic regions, Sponsored by DST, New Delhi	Mar 2019	PA-II(one) 25000/-+HRA	30	M. Sc. in Chemistry.	Column adsorption studies, water treatment
24	MLI-0035	Production of Sm ₂ O ₃ and Co ₃ O ₄ from SmCo permanent management scrap, Sponsored by Mission Directorate, CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	M. Sc. in Chemistry (Analytical/ Inorganic)	To work in hydrometallurgical processes like leaching and solvent extraction.
25	MLP-0039	Rapid and point care micro fluidic kit for multiplex diagnosis of viral diseases in tomato and apple, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(two) 25000/-+HRA	30	M. Sc. in Chemistry/ Biochemistry / Biotechnology / Microbiology / Plant Pathology/ Plant Virology/ Vegetable science OR B.Tech. in Biotechnology	Working knowledge – conjugation of gold nano particles with antibodies / sandwich Elisa /development of later flow devices/ biosensors/PCR /Nano drop Spectrophotometer etc.

26	MLP-0046	Recycling of spent battery materials for value addition. Sponsored by CSIR, New Delhi	Mar 2020	PA-II(two) 25000/-+HRA	30	M. Sc in Biotechnology/ Microbiology/ Chemistry OR B. Tech in Metallurgy / Chemical Engg.	Leaching, precipitation characterization
27	MLP-50	Processing of Mineral and Metallurgical wastes and flyash for their value addition (WP-I), Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	M. Sc in Chemistry OR B. Tech in Materials Science and Engg.	Leaching of metals from mineral/ mineral waste
28	MLP-0045	Preparation of coke and Ferro- coke from low ash non- cooking coal. Sponsored by CSIR, New Delhi	Mar 2020	PA-II(two) 25000/-+HRA	30	M. Sc in Chemistry OR BE/ B. Tech in Chemical/ Metallurgy/ Mineral Engg.	Chemical synthesis, Coke and Ferro-coke making from non coking coal
29	GAP-306	Optimization of flotation process for Indian coking coal using advanced pneuflot flotation cell, Sponsored by Ministry of Steel, GOI	Mar 2020	PA-II(one) 25000/-+HRA	30	B.Tech. in Chemical/ Metallurgical/ Mineral Processing Engg. OR M. Sc. In Chemistry.	Coal characterization, coal flotation
30	MLP-0042	Developing magnetic refrigerant materials for cooling applications at cryogenic temperatures, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	M. Sc. in Physics/ Chemistry/ Materials Science.	Synthesis and characterization of materials
31	MLP-0051	Kinetics and thermodynamics study on reduction roasting of low and lean grade iron ore using fluidized bed roaster to maximize the recovery of iron values. Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	M. Sc in Geology.	Ore mineralogy such as XRD SEM Microscopic analysis
32	MLP-0048	Dephosphorization of high phosphorus iron ore, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	BE/ B. Tech in Chemical/ Metallurgy/ Mineral Engg.	Mineral processing, reduction roasting, reduction and smelting
33	MLP-0052	Thermodynamics and Kinetics study of ferruginous limonite reduction and smelting for production of titania slag, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(two) 25000/-+HRA	30	BE/ B. Tech in Metallurgy / Chemical Engg.	Mineral processing, oxidation. Reduction roasting, and smelting
34	MLP-0031	Development of novel tungsten alloy cubes for strategic applications, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(two) 25000/-+HRA	30	B. E. / B. Tech in Metallurgy/ Materials & Metallurgical Engg./ Materials Engg./ Materials Science & Engg./ Metallurgical & Materials Engg.	Powder metallurgy and material characterization
35	MLP-50	Processing of Mineral and Metallurgical wastes and flyash for their value addition (WP-II), Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	B. Tech in Metallurgy	Fly ash characterization
36	MLP-0038	Recovery of Nickle, Chromium and Iron from Chromite Overburden (COB) in 100kg scale. Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	B. Tech in Metallurgy	Characterization of COB and its product, reduction roasting and smelting of COB

37	MLP-0049	Ferro Manganese production from lean grade Manganese ore, Sponsored by CSIR, New Delhi	Mar 2020	PA-II(one) 25000/-+HRA	30	B. Tech in Metallurgy	Characterization of mg ore and ferromanganese and smelting of Mn ore
38	MLP-0033	Design and development of a vertical slurry transport system for lifting of minerals/ ores in heterogeneous regime. Sponsored by CSIR, New Delhi	Mar 2020	PA-II(two) 25000/-+HRA	30	B.E. / B. Tech in Mechanical / Chemical / Metallurgical / Mining Engg.	Literature survey, preparation of detailed engineering drawings, computational work on designing slurry piping and other material handling systems, preparation of layout and basic design of the proposed vertical slurry pipeline pilot plant setup, supervision of the fabrication and installation of pilot plant, helping in experimental campaigns, data collection of pressure drop and other design calculation and related R & D activities pertaining to the project work
39	MLP-0041	Synthesis of Mg-Y ₂ O ₃ magnesium nano-composite by hot consolidation process for light weight applications, Sponsored by Ministry of mines New Delhi	Mar 2020	P- JRF(one) 25000/- + HRA	30	B.E. / B.Tech in Metallurgy/Materials Science, / Mechanical Engg.	Powder metallurgy, thermodynamics, heat transfer
40	GAP-295	Synthesis and characterization of ODS steels using alternative dispersoids, Sponsored by BRNS, New Delhi	Mar 2020	P- JRF(one) 25000/- + HRA	30	B.E / B.Tech in Metallurgy/Materials Science, /Nanotechnology/allied branches of Material Sciences	Powder metallurgy
41	GAP-290	Development of (W/W-Y-Cr) dual layer structure for plasma facing components, Sponsored by BRNS, New Delhi	Mar 2019	P- JRF(one) 25000/- + HRA	30	B.E. / B.Tech Metallurgy/Materials Science	Surface engineering
42	GAP- 307	Novel approach to recover individual valuable heavy minerals from pyroboferrous beach and dune sand deposits, Sponsored by Ministry of Mines New Delhi	2019	P- SRF(one) 28000/- + HRA	35	M. Tech in Chemical Engg	Experience and familiar with comminution and classification
43	MLP-0040	Sensors for detection of heavy metal ion contaminations. Sponsored by CSIR, New Delhi	Mar 2020	PA-III(one) 28000/-+HRA	35	M. Sc. in Chemistry with 2 years of relevant research experience .	Organic synthesis and fluorescence spectroscopy will be preferred
44	MLP-0031	Development of novel tungsten alloy cubes for strategic applications, Sponsored by CSIR, New Delhi	Mar 2020	PA-III(two) 28000/-+HRA	35	B.E. / B. Tech in Metallurgy/ Materials & Metallurgical Engg./ Materials Engg./ Materials Science & Engg./ Metallurgical & Materials Engg. with 2 years of relevant research experience OR M. Tech. in any of the above discipline	Experience in the field of powder metallurgy and material characterization

45	MLP-50	Processing of Mineral and Metallurgical wastes and flyash for their value addition (WP-II), Sponsored by CSIR, New Delhi	Mar 2020	PA-III(one) 28000/-+HRA	35	B. Tech in Metallurgy with 2yrs experience or M. Tech in Metallurgy/ Material Science	Separation of minerals from fly ash
46	MLP-50	Processing of Mineral and Metallurgical wastes and flyash for their value addition (WP-III). Sponsored by CSIR, New Delhi	Mar 2020	PA-III(one) 28000/-+HRA	35	B. Tech in Metallurgical and Materials Engg. M. Tech in Metallurgy/ Material Science	Reduction/ Smelting of ores/ mineral waste
47	MLP-0044	Protective conducting materials coating of La _{0.6} Sr _{0.4} Co _{0.2} Fe _{0.8} O ₃ , Mn Co ₂ O ₄ and Mn _{1.5} Co _{1.5} O ₄ and SOFC interconnect Crofer 22APU by electrophoretic deposition to mitigate high temperature oxidation and degradation, Sponsored by CSIR, New Delhi	Mar 2020	PA-III(one) 28000/-+HRA	35	M. Sc. in Chemistry/ Physics with 2 years of research experience OR M. Tech in Metallurgy/ Chemical Engg.	Performing coating experiments by electrophoretic deposition, characterization by SEM, XRD, corrosion test, high temperature oxidation
48	MLP-50	Processing of Mineral and Metallurgical wastes and flyash for their value addition (WP-I). Sponsored by CSIR, New Delhi	Mar 2020	PA-III(one) 28000/-+HRA	35	M. Sc in Chemistry with 2 yr experience OR M. Tech OR M. Sc. Tech in Materials Science and Engg.	Precipitation of metals
49	MLP-0051	Kinetics and thermodynamics study on reduction roasting of low and lean grade iron ore using fluidized bed roaster to maximize the recovery of iron values. Sponsored by CSIR, New Delhi	Mar 2020	PA-III(two) 28000/-+HRA	35	M. Tech in Mechanical/ chemical Engg. OR BE/ B. Tech in Mechanical/ Chemical Engg. with 2 yrs relevant experience	Thermodynamic and kinetic calculations and mathematical modelling of fluidized roasting process
50	MLP-0045	Preparation of coke and Ferro- coke from low ash non-cooking coal. Sponsored by CSIR, New Delhi	Mar 2020	PA-III(three) 28000/-+HRA	35	M. Tech in Chemical/ Mining/ Metallurgy OR BE/ B. Tech in Chemical/ Mineral/ Metallurgy Engg. with 2yrs of relevant experience	Coke and Ferro- coke making, from non-coking coal, Thermodynamic and Kinetic study
51	MLP-0048	Dephosphorization of high phosphorus iron ore. Sponsored by CSIR, New Delhi	Mar 2020	PA-III(one) 28000/-+HRA	35	M. Tech in Chemical/ Mineral/ Metallurgy/ Material Resource Engg. OR B.E. / B. Tech in Chemical/ Mineral/ Metallurgy Engg. with 2yrs of relevant experience	Mineral processing, reduction roasting, reduction and smelting
52	GAP-306	Optimization of flotation process for Indian coking coal using advanced pneuflot flotation cell, Sponsored by Ministry of Steel, GOI	Mar 2020	PA-III(one) 28000/-+HRA	35	M. Tech in Chemical/ Metallurgical/ Mineral Processing Engg. OR B.Tech. in Chemical/ Metallurgical/ Mineral Processing Engg. OR M. Sc. in Chemistry with 2yrs of relevant experience	Experience in mineral or coal preparation, coal characterization, coal flotation
53	MLP-0049	Ferro Manganese production from lean grade Manganese ore, Sponsored by CSIR, New Delhi	Mar 2020	RA-1(one) 36000/- +HRA	35	Ph.D in Analytical Chemistry/Organic Chemistry	Chemical and mineralogical characterization of raw materials and products. (Mn. ore, Fe-Mn)

54	MLP-0045	Preparation of coke and Ferro- coke from low ash non-cooking coal. Sponsored by CSIR, New Delhi	Mar 2020	RA-I(two) 36000/-+HRA	35	M. Tech in Chemical/ Metallurgy Engg. with 2 yrs of relevant experience	Coke and Ferro- coke making, from non-coking coal, Thermodynamic and Kinetic study
55	MLP-0048	Dephosphorization of high phosphorus iron ore, Sponsored by CSIR, New Delhi	Mar 2020	RA-I(one) 36000/-+HRA	35	M. Tech in Chemical/ Metallurgy/ Material Resource Engg. with 2yrs of relevant experience	Mineral processing, reduction roasting, reduction and smelting
56	MLP-0038	Recovery of Nickle, Chromium and Iron from Chromite Overburden (COB) in 100kg scale, Sponsored by CSIR, New Delhi	Mar 2020	RA-I(one) 36000/- +HRA	35	M. Tech in Metallurgy with 2 yrs experience	Processing of COB to recover valuable metals
57	GAP-308	Conversion of emitted C O ₂ to chemical fuels, Sponsored by Ministry of Steel, Govt. of India	Oct 2021	RA-I(one) 36000/- +HRA	35	Ph.D in Engineering	Catalysis reactor designing

Total Positions = 73 (Project Staff as PA – I/II/III, JRF/SRF and RA)

Note:

1. For all the positions with **Diploma, B.Sc., M.Sc., B.E. ,B.Tech., M.Tech. and M.Sc. Tech.** the **minimum requirement is 55% for the eligibility**
2. **One can apply for more than one project/position in a single application mentioning the post code/project/position in the application if he/she meets the eligibility criteria**
3. HRA will be provided as per the norms of the funding agency and the Institute to selected project staff who do not avail institute accommodation.
4. Experience means research experience in the relevant field only. M.Tech. qualification will be considered as 2 years' experience and M.Phil.as 1 year.

INSTRUCTIONS AND INFORMATION FOR CANDIDATES

- 1 Interested candidates fulfilling all the eligibility criteria may apply online and download the filled in Application Form. **Only shortlisted candidates will be called for interview and they should bring the signed application form along with self attested recent photograph and photocopies of certificates (including experience certificate) and mark sheets and respective original documents for verification.** Application forms with incomplete/wrong information, detected at any stage, are liable for rejection.
- 2 Director CSIR-IMMT reserves all rights to cancel recruitment of any or all of the positions advertised above at any stage and reject any application without assigning any reason whatsoever.
- 3 The above positions are purely temporary and initial offer for engagement in any project shall be for a period of maximum one year. However, the engagement may be extended or curtailed depending upon the duration of the project and (or) performance of the candidate.

- 4 Total tenure of engagement (including service rendered earlier in CSIR-IMMT and/or any other CSIR Institute/HQrs taken together), will be limited to 5 years only.
- 5 All those candidates who are continuing as PAs etc. in CSIR-IMMT/other CSIR institutes in any project will only be considered for appearing the interview against proof of permission from that project leader where s/he is continuing.
- 6 Age relaxation is admissible to SC/ST/PH/OBC & Women candidates as per instructions of Govt. of India/CSIR.
- 7 Unless otherwise mentioned under column 7, equivalent/higher degrees shall not be considered as essential qualification for any position.
