



CSIR-National Metallurgical Laboratory (NML), a constituent Laboratory of the **Council of Scientific & Industrial Research (CSIR)** is a R&D organization dedicated to metallurgical and materials engineering research. Its domain of operations encompasses raw materials processing, new strategies for metal extraction, metallurgical wastes and lean resources utilization, energy, sustainability and environmental issues of metallurgical processing, innovation and interventions for rural and artisanal materials technology, advanced alloys and materials development, metal forming and formability, corrosion and surface engineering, materials mechanics, materials and process modelling, microstructural engineering, non-destructive evaluation, structural integrity assessment etc. With its modern and extensive infrastructure and the large spectrum of expertise of its Scientific and Technical manpower, CSIR-NML is primarily engaged in industrially significant research pursuits and demonstration of high quality science.

To augment and strengthen its research activities in the areas of advanced alloys development, metal forming and formability, materials mechanics, microstructural engineering, materials modelling, corrosion inhibition, mineral engineering, extractive metallurgy and project engineering, CSIR-NML intends to recruit persons with enthusiasm for quality research and high degree of motivation at scientific positions of the Laboratory.

Online Applications from bonafide Indian nationals are solicited for the following Scientific positions for the above requirements. Online Applications must be made Postcode-wise. Separate Online Applications must be made for each Post code.

Details (Pay Level, Designation, Essential Minimum Qualifications and Essential Minimum Experience, Upper Age limit and approximate Indicative monthly Gross Salary per month including HRA and other allowances) of the vacant positions together with information on the overall reservation status are given below.

Total No. of Posts & Reservation Status	Pay Level	Designation	Essential Minimum Qualifications	Essential Minimum Experience	Upper Age limit	Indicative monthly Gross salary
18 (10 UR + 3 OBC + 3 SC + 1 ST + 1 EWS) (Including 4 Backlog positions i.e. 2 SC & 2 OBC)	Level-11	Scientist	M Tech	-	32 years	Rs 90,000/- approx
			Ph.D (Science/ Engineering) Submitted	-		
	Level-12	Senior Scientist	Ph.D (Engineering)	-	37 years	Rs 1,05,000/- approx
			Ph.D (Science)	2 years in relevant area		
			M Tech	3 years in relevant area		
	Level-13	Principal Scientist	Ph.D	3 years of Post-Doctoral research experience in relevant area	45 years	Rs 1,17,000/- approx

The profiles of candidates being sought by CSIR-NML and a description of the research requirements for the various posts are as follows:

Total Posts – 18 Posts (Scientist -UR-10, OBC- 3, SC-3, ST-1, EWS-1)

Post Code	Number of Post and Reservation status	Pay Level /Post	Essential Educational Qualifications & Experience	Desirable Qualifications (After fulfilling Essential Qualifications)	Job description
S-01	1 (UR)	Level 13, Principal Scientist	Ph.D in Materials/ Metallurgical Engineering with 3 years of Post-doctoral relevant experience	1. B. Tech in Materials/ Metallurgical Engineering 2. M. Tech in Materials/ Metallurgical Engineering 3. Experience in the area of advanced steelmaking process	Research & development in advanced steelmaking process like direct steelmaking, twin roll and strip casting, hydrogen based technology, liquid refining, inclusion engineering, big data and machine learning approach in steel making, etc.
S-02	1 (UR)	Level 13, Principal Scientist	Ph.D in Chemistry with 3 years of Post-Doctoral research experience in relevant area	Research experience in R&D labs/industry in the area of coal research/coal characterization/coal beneficiation supported by excellent publications and/or patents.	To carry out independent R&D in the field of coal research/advanced coal characterization/coke making processes. To conceive, obtain and undertake externally funded projects in the above mentioned areas independently.
S-03	1 (UR)	Level 12, Senior	M.Tech./M.E. in Metallurgical/ Mechanical/ Materials Engg. with 03 years of relevant	B. Tech in Materials/ Metallurgical/Mechanical Engineering	Research on Integrated Computational

		Scientist	experience in industry/research OR Ph.D.in Metallurgical/ Materials Engg.	Preferably PhD in multi-scale calculations; Experience in development and use of simulation software in this area. Proven High-Performance Computing capability with excellent research track record.	Materials Engineering (ICME) for the development of new products or components using advanced processing / manufacturing techniques The position is expected to be able to form and lead a group
S-04.	1 (UR)	Level 12, Senior Scientist	M.Tech./M.E. in Metallurgical/ Materials Engg. with 03 years of relevant experience in industry/research Or PhD in Metallurgical/ Materials /Mechanical/Chemical Engineering	B.E/B.Tech degree in Metallurgical/ Mechanical/Chemical Engineering, with exposure to data analytics or digital visualizations. Experience in Public Communications.	Coordinating trainings, popularizing science and technologies, dissemination of NML specific scientific and technical information
S-05.	1 (UR)	Level 12, Senior Scientist	M.E/M.Tech in Chemical Engineering with 3 years of relevant experience Or Ph.D in Chemical Engineering	1. B.Tech in Chemical Engineering 2. Experience in carbon sequestration/ capture/ storage and use	Research & development on pre and post combustion advanced carbon capture technologies such as advanced solvents, sorbents, membranes, and novel concepts
S-06	1 (UR)	Level 12, Senior Scientist	Ph.D in Materials/ Metallurgy /Mechanical/ Chemical Engineering Or Ph.D. in Physical/Chemical Sciences with 2 years of relevant experience or M.Tech in Materials/Metallurgy/ Mechanical Engineering with 3 years of relevant experience Or B.E/B.Tech/M.Sc. with MBA or Post Graduate Degree in Intellectual Property Law with 3 years of relevant experience	Working Experience in IPR Management, R&D Management or Technology Marketing or One year Post Graduate Diploma in Patent Law/Intellectual Property Rights/ Technology management	Management of Intellectual property, act as an interface between scientists and industry/government agencies/R&D institutes/international agencies and undertake liaison activities for the promotion of research & business development/ translational research and institutional programs. The incumbent should be creative, innovative and proven skill in IPRs management.
S-07	1 (UR)	Level 12, Senior Scientist	Ph D in Geology /Applied Geology with 2 years relevant experience	Ph D thesis / other documented research work in the area of Characterisation of ore/minerals/coal	To carry out R & D in characterization of ore/minerals/coals
S-08	1 (UR)	Level 12, Senior Scientist	M.Tech./M.E. in Metallurgical/ Materials Engg. with 03 years of relevant experience in industry/research OR Ph.D.in Metallurgical/ Materials Engg.	B.Tech./B.E./B.Sc. (Engg) in Mechanical/Metallurgical/Materials Engg. AND Documented research experience in metal (ferrous and/or non-ferrous) powder production, effect of gas atomization parameters on powder size, shape and size distribution. Characterization of bulk powder properties. Knowledge of nozzle design, gas/metal fluid flow interaction and atomization efficiency Knowledge on Solidification Phenomena	Research on development of metal powder for additive manufacturing
S-09	1 (SC)	Level 11, Scientist (Posting at NML-MC Chennai)	M. Tech. / M.E. in Mineral Processing / Mineral Engineering / Mineral Process Engineering OR PhD submitted in Mineral Processing / Mineral Engineering / Mineral Process Engineering .	Experience in (a) mineral processing plant operations from industry or (b) recognized R&D laboratory / institute Knowledge in design and operation of flotation column	R&D in mineral processing which includes laboratory scale, on-site pilot plant scale and commercial scale plant operations, mainly related to flotation/column flotation
S-10	1 (EWS)	Level 11, Scientist	Ph D submitted in Materials Science/ Physics/ Chemistry	Research experience in the field of design and development of functional nano materials for energy / health sector	R & D
S-11	1 (UR)	Level 11, Scientist	M.Tech in Materials/ Metallurgical Engineering	1. B.Tech in Materials/ Metallurgical Engineering 2. Relevant Experience in Electrometallurgy	Research & development on electrometallurgy in the area of critical

					metals and REE
S-12	1 (UR)	Level 11, Scientist	M.E./M.Tech. in Mineral /Metallurgical /Materials/ Chemical Engineering	<ul style="list-style-type: none"> R & D /Industrial experience in mineral / coal beneficiation/ agglomeration. Documented research work in the area of Mineral/coal beneficiation/ agglomeration. 	To carry out R & D in mineral /coal beneficiation.
S-13	1(ST)	Level 11, Scientist	M. Tech./M.E. in Metallurgical or Materials or Mechanical Engg	<p>Dissertation in experimental fracture mechanics covering any one of domains such as linear elastic / elastic plastic / time dependent fracture mechanics in metallic materials</p> <p>Experience in modelling as documented by publication in addition to experimental exposure</p> <p>Experience in working with servo-hydraulic test frames as documented by testimonials from department / lab supervisors</p>	Research on ductile fracture behaviour, fatigue crack growth, creep crack growth behaviour of metallic materials using pre-cracked specimens
S-14	1 (OBC)	Level 11, Scientist	M Tech/ M E in Mechanical/ Materials/ Metallurgical / Engineering	<p>Bachelor degree in Mechanical/ Materials/ Metallurgical / Engineering with first class.</p> <p>Two years of experience in the area of Welding/ material joining OR PhD in the areas of Welding</p>	R&D in Welding/Joining
S-15	1 (SC)	Level 11, Scientist	Ph.D submitted in Materials / Metallurgical Engg./ Materials Science/ Physics / Chemistry	<ul style="list-style-type: none"> In the area of Surface Engineering & Coating Technology Experience in the area of Smart /functional Coatings by chemical, Electro-chemical, PVD/CVD Techniques for tribological/ corrosion resistant/Energy applications 	Carry out R & D in the area of surface engineering and coating technologies to mitigate the challenges faced by the industries and development of advanced coatings
S-16	1 (SC)	Level 11, Scientist	<p>M. Tech in Electronics/ ECE/ Instrumentation Engg.</p> <p>OR</p> <p>Ph D submitted in Physics/ Electronics / ECE/ Instrumentation Engg.</p>	<ul style="list-style-type: none"> B. Tech in Electronics & Instrumentation OR M. Sc in Physics 	R &D in signal & image processing, real time data management, system automation, magnetism & magnetic materials
S-17	1 (OBC)	Level 11, Scientist	<p>M Tech in Materials / Metallurgical / Chemical Engg.</p> <p>OR</p> <p>Ph.D submitted in Metallurgy / Metallurgy & Material / Chemical Engg.</p>	<ul style="list-style-type: none"> B.Tech (Materials / Metallurgical / Chemical Engg.) <p>Candidate with experience in handling mineral /metallurgical waste</p>	Research and technology development on utilization of mineral/metallurgical waste
S-18	1 (OBC)	Level 11, Scientist	Ph.D submitted in Chemistry	Conventional and instrumental chemical analysis of Ore, Minerals, Metals and other mineral/metallurgical products with specialization in Analytical Chemistry	Research & development on analytical techniques Chemical analysis of Ore, Minerals, Metals and other mineral/metallurgical products using conventional and instrumental techniques

- B. Tech equivalence are BE / B. Tech / BSc(Engg.) and others
- M. Tech equivalence are ME / M. Tech / MSc(Engg.) / MS and others
- Equivalent technical degrees will also be considered.

Procedure for Online application:

- Only **ONLINE APPLICATIONS** will be accepted. The link for ONLINE APPLICATION will be available on CSIR-NML's website www.nmlindia.org from **09:00 Hrs of 29-05-2021 to 17:00 Hrs of the 28-06-2021**.
- After submission of their ONLINE APPLICATION, Applicants are requested to take a printout.
- The printout of ONLINE APPLICATION duly signed, along with self-attested copies of certificates of educational qualifications, mark sheets, experience certificates, Re-print of publications, documentary proof in support of date of birth, community/category certificate (SC/ST/OBC/EWS/PWD etc.), if applicable, and **applicable fee of Rs. 100.00 in the form of Demand Draft** favouring **THE DIRECTOR, National Metallurgical Laboratory, Jamshedpur** payable at **State Bank of India, NML Branch, Branch Code- 03329, Jamshedpur** should be sent to **The Controller of Administration, CSIR-National Metallurgical Laboratory, Burmamines, Jamshedpur 831007 Jharkhand**, so as to reach on or before **13-07-2021**. The Advertisement Number and Post Code must be clearly indicated on the top of the envelope containing the application. Candidates belonging to PWD categories, women candidates and departmental candidates (from CSIR Laboratories /Institutes) need not pay any application fee.
- (i) 'Candidate's Name (ii) Application number and (iii) 'Post Code Applied for' must be filled up on the back side of Demand Draft.**
- Application once made will not be allowed to be withdrawn and fees once paid will not be refunded on any count nor can it be held in reserve for any other recruitment of selection process.

Terms and conditions:

- Total number of posts may vary. Not all posts need to be filled if suitable candidates are not found.
- One Online Application may refer to one Postcode only. Separate Online Application must be made if a candidate desires to apply for more than one Postcode.

- The posts carry usual allowances such as Dearness Allowance (DA), Transport Allowance, HRA (House Rent Allowance) in the event of unavailability of council accommodation etc. as per entitlement and other allowances under the Central Government Rules as applicable to the CSIR.
- The candidates selected will be governed by the provisions of the New Pension Scheme as introduced by the Govt. of India w.e.f. 01-01-2004 to the extent made applicable by CSIR to its employees.
- Online Applications from candidates working in Government departments, public sectors, autonomous organisations and Government funded research agencies will be considered only if forwarded through proper channel and with no objection certificate that the applicant will be relieved within one month of receipt of the appointment order. However, advance copy of the application may be submitted before the closing date and **No Objection Certificate** may be submitted at the time of interview. Applications routed through proper channel should reach at the earliest.
- Only those candidates who are eligible and who suit the institutional requirements, short-listed based on screening criteria, will be called for interview. Mere fulfilment of the minimum prescribed qualifications and experience does not entitle a candidate for being called for interview. Candidates should therefore provide in their applications all qualification and experience details, over and above what is prescribed as minimum, supported with documents, if applicable.
- The decision of CSIR-NML in all matters relating to the eligibility, acceptance or rejection of applications, mode of selection, conduct of examinations/interviews will be final and binding on the candidates and no enquiry or correspondence will be entertained in this connection from any individual or his/her agency.
- Relaxation in age limit, maximum up to 5 years for SC/ST/and 3 years for OBC, will be admissible to candidates who apply for the postcodes earmarked for the respective reserved category. Relaxation in age for Ex-service man and other entitled categories of candidates shall be admissible as per Govt. of India/CSIR rules. Relaxation in age limit up to 5 years may be allowed to Council/ Government/ Autonomous Bodies/ Public Sector employees in accordance with the instructions and orders issued by the Government of India/CSIR from time to time in this regard. Relaxation in upper age limit for Persons with Disability (PWD) will be admissible up to 10 years. However, for PWD candidates belonging to SC/ST/OBC categories, it will be over and above the relaxation admissible to the respective categories. Special age relaxation up to the age of 35 years (up to 40 years for members of SC/ST and up to 38 years for members belonging to OBC category candidates in respect of the posts reserved for them) is admissible in the case of Widows, Divorced Women and Women Judicially Separated from their husbands, who are not remarried, subject to production of following documentary evidence (s):
 - (i) In case of widow, death certificate of her husband with the affidavit that she has not remarried since;
 - (ii) In case of divorced woman and woman judicially separated from their husband, a certified copy of the judgement/decreed of the appropriate court to prove the fact of divorce or judicial separation, as the case may be, with an affidavit in respect of divorced woman that she has not remarried since.
- SC/ST/OBC/EWS/PWD candidates are required to produce certificate in prescribed format signed by competent authority at the time of interviews. EWS/OBC candidates are required to produce recent certificate valid for appointment to posts under the Central Government.
- The period of experience wherever prescribed should be in the relevant discipline/area of work and it shall be counted with effect from the date of acquiring the prescribed essential educational/professional qualifications required for the posts. Completion of PhD degree will be deemed to have taken place from the date of issue of provisional certificate / notification.
- While giving the periodicity, nature of experience and Research papers, the details should be given in exhaustive manner in a separate sheet.
- **The date for determining the age limit/experience/qualifications shall be the closing date prescribed for receipt of Online Application i.e. 28-06-2021**
- Travelling allowance by second class by shortest route will be paid to the candidates called for interview from the place of residence or from the actual departing station to the place of interview whichever is nearer, limited to travel within India.
- Candidates staying and applying from abroad may opt for consideration for selection in absentia through a written request.
- Incomplete applications (i.e. without photograph, signature, application fee and essential certificates/testimonials etc. in support of educational qualifications and experience) will not be entertained and will be summarily rejected.
- Canvassing in any form and/or bringing in any influence, political or otherwise, will be treated as disqualification for the post.
- CSIR-NML strives to have a workforce that reflects gender balance and women candidates are encouraged to apply.
- **General information / instructions for online application are given at our website www.nmlindia.org.**
- **Applicants/candidates are requested to keep on visiting our website, i.e. www.nmlindia.org for any further information/update.**

Apply Online - <http://hrq.nmlindia.org/gr42021/>

Controller of Administration