

DEPARTMENT OF METALLURGY & MATERIALS SCIENCE

(2020-2021)

❖ INTRODUCTION

The Metallurgy and Materials Science Department is a unique establishment in and around western Maharashtra in educating students as Materials Engineers. Day by day, the demand of skilled human resource in the industry is rising sharply due to the globalization of Indian economy. The department strives hard in fulfilling these requirements. The active support of eminent members of alumni in India and abroad - ranging from research scientists in developing computer chips to the managing directors - has helped the department in training the students in state of the art technology. There is an intake of 60 students for B.Tech course. Additional six students are admitted through Diploma stream and the NRI intake is around 15%. The total intake capacity for M. Tech programme is 36 with specializations in Materials Engineering and Process Metallurgy. In addition, there are **19** students registered for Ph.D. program out of which **5** are pursuing full time Ph.D.

❖ ACADEMIC PROGRAMS (B. TECH/ M. TECH/ Ph. D)

The Metallurgy and Materials Science Department currently offers B.Tech. and M.Tech. programmes. The B.Tech. programme offers a comprehensive fundamental education in metallurgical engineering. The Department offers M.Tech. Programme in two specialization, i.e. Materials Engineering and Process Metallurgy. The programme consists of course work in the areas of specialization followed by a one year duration dedicated to thesis work.

- B. Tech Metallurgical Engineering
- M. Tech Materials Engineering
- M. Tech Process Metallurgy
- Ph.D

❖ FACULTY STRENGTH

Sr. No	Designation	No. of Faculty
1	Professor	04
2	Emeritus Professor	02
3	Associate Professor	00

4	Assistant Professor	08
5	Visiting Faculty	00
6	Adjunct Faculty	03
Total		17



❖ MAJOR EQUIPMENTS & FACILITIES

Name of the Lab	Facilities
Ceramic Processing Laboratory	Tubular Si-C Furnace, Universal Testing Machine, , BET surface area analyser Jar Mill, Rotap Sieve Shaker Spray dryer, Analytical Weighing balance Laboratory Oven, Si-C Furnace
Surface Engineering Laboratory	Gas Nitriding Furnace, Wire Flame Thermal Spray, Induction Furnace, Drip Carburizing Furnace, Fluidized-bed Nitriding Furnace, Powder Flame Thermal Spray & Grit Blasting Machine, Laser Machine, X-Y Table, Muffle Furnaces (No. 4)
Advanced Materials Laboratory - Eaton Sponsored	Potentiostat, Jasco - UV visible Spectrophotometer, FTIR Spectrophotometer, Adhesion Tester, Mould and Press Assembly, Interface 1000 Potentiostat System, Thickness Gauge,
Powder Metallurgy and Tribology Laboratory	Attritor Mill, Hot Press Compaction Machine, Weighing Balance- Nos, Weighing Balance-Nos, Powder Coating Apparatus, Fatigue Test Machine, Image Analyser, Digital Multimeter, Powder Compacting Machine, Muffle Furnace, Electroytic Polishing, Pin-On-Disc (magnum make), Low Speed Diamond Machine, Cryogenic System, MoSi2 sintering Furnace, Vacuum Sintering Furnace, Low Temperature Muffle Furnace, Sintering Furncae-I.
Polymer and Nano Composites Laboratory	Twin Screw Extruder, Thermogravimetric Analyser, DSC, Vaccum Oven, 7.5 Digit Multimeter (Keithley, Germany), Plastic Injection Moulding, 2 Ton UTM - Polymer testing, Digital Source Meter (Tektronix Inc, USA), Electrometer/ High Resistance Meter (Keithley, Germany), Dilatometer (V.B. Ceramics, Indra), 4 Points Probe Conducting Meter (Lucas Signatone, USA), Precision Impedance

	Analyser (Wayne - Kerr, UK), Hot Compaction M/C (Kimya Ind., India), Melt Flow Index Tester, Izod Impact Tester
Computer Laboratory	HP Compac Pro 6300 Led Monitor Desktop 60 nos
Scanning Electron Microscope Laboratory	FE -SEM + EDS
Metallography and Image Analysis	Optical Microscope, Inverted Microscope, Optical Microscope with Image Analyzer, Upright Microscope, Charpy, Hot Mounting Press, Automatic Polishing Machine, Stereo Microscope, Microhardness Tester, Inverted Microscope- Ziess.
Material Analysis Laboratory	Analytical Balance (2 Nos), Strohlins Carbon Analyser, Electrogravimetric analyzer, Atomic Absorption Spectroscopy.
Mechanical Testing Laboratory	Ericson Cupping, 60 T UTM, 10 T UTM, Vickers hardness tester, Brinell hardness tester, Rockwell hardness testers, Digital Charpy Impact testing machine.
Manufacturing Process Laboratory	Rolling Mill, Jaw crushers (2 No.), Rotary Swagger
Foundry Laboratory	Induction Furnace, Centrifugal Casting machines (2 Nos.), Muller mixer (2 kg- 5 kg), Sieve analysis set up, Shell moulding machine, Sand testing equipments: UTM, Permeability meter, Rapid moisture teller.
Corrosion and Surface Protection Lab	Tubular High Temperature Furnace , Slow strain rate testing machine, Scratch tester, Wear and Friction motor, potentiostat, galvanostat.

❖ EQUIPMENT PURCHASED:

Name of the Lab/ section	Module Description	Usage	Date of purchase / development dd/mm/yyyy	Resource consumed (amount in Lakhs)
X ray diffractometer,	Make: Bruker D8 Advance with Da Vinci Design	Research and Investigation	January 2021	108
High Temp Pin-on-disk	Make: Ducom	Research	March 2021	9.145

❖ RESEARCH & DEVELOPMENT ACTIVITIES

Sr. No	Research Activities	Total No.
1	No. of Books Authored	00
2	No. of Conference/Seminars/ workshops attended	26
3	No. of Conference/Seminars/ workshops organized	10
4	No. of publications in International/National Journals and conference	18
5	No. of the Industry Sponsored Projects	05
6	No. of Government Sponsored Projects	06
7	Value of the Government Sponsored Projects (In Lakhs)	40.933
8	No. of Consultancy Projects	00
9	No. of Students gone to foreign universities for further studies	03
10	No. of Ongoing Ph. Ds	23

❖ Details of Sponsored Research Projects

Sr. No	Title	Name of the Project Leader	Year in which started	Funding agency	Duration	Amount sanctioned (Rs)
1	High temperature wear study of High Entropy Alloy	N B Dhokey and V S Poddar	August 2020	AICTE-RPS	3 years	12.533 lac
2	Studies on metallurgical and mechanical properties of En19 Steel for small arms gun barrel applications	N B Dhokey and V S Poddar	March 2021	DRDO-ARDE	2 years	8.5 lac
3	Development of super high Curie temperature piezoceramic with isotropic properties through controlled doping	K R Kambale, J. W. Dadge	August 2020	In-house Interdisciplinary Minor Research Project	2 years	5.0 lac
4	Incremental forming of the Aluminium Alloys: Role of Texture and Microstructure and forming parameters	A. M. More	August 2020	In-house Interdisciplinary Minor Research Project	2 years	5.0 lac
5	Design and Development of Resistance Heating Nitriding Furnace	P. G. Ranaware, R. T. Ugale	August 2020	In-house Interdisciplinary Minor Research Project	2 years	4.9 lac

6	Corrosion and wear behaviour of biomaterials	S. T. Vagge, K. S. Surunje	August 2020	In-house Interdisciplinary Minor Research Project	2 years	5.0 lac
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❖ Projects

Sr. No	Title	Name of the Project Leader	Year in which started	Funding agency	Duration	Amount sanctioned (Rs)
1	Transfer and effect of nitrogen in duplex super duplex and austenitic stainless steel in various welding processes and its effect on mechanical properties	Prof. P.P. Deshpande, Siddhant Rakhe	2020-2021	ADOR Welding Ltd.	1 year	NA
2	Production of Li-Disilicate ingot for pressable dental prosthesis.	Dr. S.P. Butee	2020-2021	D Tech Dental Technologies	1 year	10000 per month for 6 months
3	Developing powder making technology for dental zinc phosphate cement	Dr. K.R. Kamble	2020-2021	D Tech Dental Technologies	1 year	10000 per month for 6 months

❖ PUBLICATIONS

Sr. No	Name of Department	Research Publications				Total
		National Journal	International Journal	National Conference	International Conference	
1	Metallurgy Engineering	00	23	09	16	48

PUBLICATIONS IN INTERNATIONAL JOURNALS

Sr. No.	Title of the Paper	Authors	Publication Details/Vol. No.	National/ International
1	Evaluation of Thermoelectric Properties of Doped b-IronDisilicide Prepared by the Powder Metallurgy Technique	V. Poddar, N.B. Dhokey	Transaction of Indian Institute of Metals, 10.1007/s12666-020-02167-5	International
2	Wear behavior of hot deformed and agedAA7075 reinforced 12 vol% graphite particulates composites	N.B.Dhokey, A.G.Jadhav,S.S.Ni mbalkar	Materials Today: Proceedings	International
3	Influence of Process Parameters on Countercurrent Reactor Reduction of Oxidized Mill Scale Waste and Its Co-relationship with Mathematical Model	P.C. Jikar, N.B. Dhokey	Journal of Sustainable Metallurgy volume, https://doi.org/10.1007/s40831-020-00297-0	International
4	Modelling of oxidation phenomenon of mill-scale and analysis of influencing parameters	P.C. Jikar, R. Sabban, C. Tadwalkar, N.B. Dhokey	Materials Today: Proceedings	International
5	Overview on production of reduced iron powder from mill scale waste	P.C. Jikar, N.B. Dhokey	Materials Today: Proceedings	International
6	A novel process for spheroidization of irregular shaped metallic powders	Jay Runwal,Revati Ambekar , N.B. Dhokey	Powder Metallurgy, https://doi.org/10.1080/00325899.2020.1848974	International
7	Influence of Intermediate Cryogenic Treatment on the Microstructural Transformation and Shift in Wear Mechanism in AISI D2	N.B. Dhokey, C.Thakur, P. Ghosh	Tribology Transactions, https://doi.org/10.1080/10402004.2020.1804652	International

	Steel			
8	Study of hot pressed sintering of premixed Al7075 based B4C reinforced composites on wear mechanism	N.B. Dhokey, S.U. Dangrikar	Materials Today: Proceedings, https://doi.org/10.1016/j.matpr.2020.11.255	International
9	Evaluation of mechanical properties of cold roll bonded mild steel and aluminum	V. Poddar, M.J. Rathod	Materials Today: Proceedings	International
10	Investigation of nanocrystallization behaviour of AISI 316 stainless steel under adiabatic and non-adiabatic severe plastic deformation	P. Ranaware. M.J. Rathod	Materials Today: Proceedings	International
11	Wear behavior and machinability of hot pressed sintering of B4C reinforced M3/2 HSS composite	V.T.Thavale, N.B.Dhokey	Materials Today: Proceedings	International
13	High electromagnetic interference shielding of poly(ether-sulfone)/multi-walled carbon nanotube nanocomposites fabricated by an eco-friendly route	R. Verma, R,K, Goyal, M.J. Rathod	IOP Science Nanotechnology, 31(38), July 2020, DOI: 10.1088/1361-6528/ab97d3	International
14	Improved Process for Synthesizing n-type and p-type β -FeSi ₂ Thermoelectric Material from Attritor Milled Powder	V.Poddar, N.B. Dhokey, S.P. Butee	Materials Today: Proceedings	International
15	Improvement in Mechanical Properties of 42CrMo4 Steel Through Novel Thermomechanical Processing Treatment	A.S. Thakre, S.P.Butee, K.R. Kamble	Metallography, microstructure, and analysis - Springer, DOI 10.1007/s13632-020-00684-9	International

16	Microstructural aspects of tensile strength, toughness and wear for 34CrMo4 steel	A.S. Thakre, S.P. Butee, K.R. Kamble	Materials Today: Proceedings	International
17	Electrical, mechanical, and electromagnetic interference shielding properties of poly (ether-ketone)-MWCNT nanocomposites	Kulthe, M.G., Goyal, R.K. & Butee, S.P.	Journal of Materials Science: Materials in Electronics, https://doi.org/10.1007/s10854-020-04359-7	International
18	Wear Behaviour of Nano- and Micro-Y2O3 dispersed SS316L PM Structural Steels	P.S. Yadav, S.P. Butee	Materials Today: Proceedings	International
19	Synthesis of AA 7075 Based 10 wt.% Graphite Reinforced Composites for High Damping Capacity	N.B. Dhokey, A.G. Jadhav , S.S. Nimbalkar , V. Nimbalkar	Advanced Engineering Forum Submitted: 2020-07-19 ISSN: 2234-991X, Vol. 40, pp 13-24	International
20	designing of 10 wt.% Graphite particulate hot forged AA 7075 Composites and its loss factor analysis	N.B. Dhokey, A.G. Jadhav , S.S. Nimbalkar , V. Nimbalkar	Adv. Mater. Lett. 2021, 12(4) 1-7	International
21	Overview on Hardfacing Processes, Materials and Applications	R. Garbade, N. B. Dhokey	Advances in Materials Processing & Manufacturing Applications (iCADMA 2020) , Nov 5-6 2020, IOP Conference Series: Materials Science and Engineering	International
22	Formulation of mathematical model for improved heat transfer in heat sink electronic system	Satyam Sastare † , Harshada Bhand, N.B. Dhokey	Materials Today: Proceedings	International
23	Dimensionless model and performance analysis of low temperature thermoelectric materials	Vismay Chandra , Taher Balasinorwala, N.B. Dhokey	Materials Today: Proceedings	International

PUBLICATIONS IN INTERNATIONAL MAGAZINES / NEWS REPORT

Sr. No.	Title of the ARTICLE	Authors	Publication Details/Vol. No.	National/ International
1	Environment-Friendly Zinc Aluminum Flake Coating for Corrosion Protection	Kalyan Dhakane, Abhijit Bhopale, Pravin Deshpande	Fasterners Technology International, USA industrial magazine June 2021 issue	International
2	Release of a Special Issue of the Transactions, Indian Institute of Metals, on the theme "Special Topics in Advanced Materials Engineering", published by Springer in honour of Professor Subbarao's 90th birthday.	Dr. S. P. Butee, Dr. N. B. Dhokey, Dr. V. S. Poddar	IIM metal news bulletin august 2020, Pg. No. 32-33	International
3	14th Dr Dara P Antia Memorial Lecture	Dr. S. P. Butee, Dr. N. B. Dhokey	IIM metal news bulletin October 2020, Pg. No. 32-33	International
4	Powder Metallurgy Short Course 2020	Dr. S. P. Butee, Dr. N. B. Dhokey, Dr. V. S. Poddar	APMA 2021 Newsletter, Pg. No. 5 of 8	International
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6				
7				

PUBLICATIONS IN NATIONAL JOURNALS				
Sr. No.	Title of the Paper	Authors	Publication Details/Vol. No.	National/ International
1	Nil			
PUBLICATIONS IN NATIONAL CONFERENCES				
Sr. No.	Title of the Paper	Authors	Publication Details/Vol. No.	National/ International
1	OVERVIEWS ON POWDER ROLL COMPACTION: CHALLENGES AND SCOPE IN FABRICATION OF PM PRODUCTS	Y.P. FATANGADE A , N.B. DHOKEY A	Advancement of Materials Processing Technology, NIT Jamshedpur, 31 Oct- 2 Nov 2020	National
2	WEAR STUDY OF POLYMER NANOCOMPOSITES-A REVIEW	M.G. KULTHE1, BHAGAWATI CHATE	Advancement of Materials Processing Technology, NIT Jamshedpur, 31 Oct- 2 Nov 2020	National
3	REMARKABLE EFFECT OF GRAPHENE AND NIOBIUM ON THE PROPERTIES OF FECOCRNI BASED HIGH ENTROPY ALLOY	VAISHALI PODDAR* , NARENDRA DHOKEY, AKSHATA GOLE, RUTUJA DONGARE	Advancement of Materials Processing Technology, NIT Jamshedpur, 31 Oct- 2 Nov 2020	National
4	MECHANICAL TESTING OF COMPOSITE SANDWICH STRUCTURE FOR FORMULA SAE RACECAR	YOGESH SHETE, SANKET LOTHE , MANISHA KULTHE	Advancement of Materials Processing Technology, NIT Jamshedpur, 31 Oct- 2 Nov 2020	National
5	A MECHANISM OF INTERFACIAL CARBIDE NUCLEATION IN CRYOGENICALLY TREATED CEMENTED TUNGSTEN CARBIDE WIRE DRAWING DIES	SHREYAS JOGLEKAR, DIVYANSHSAXEN A, N.B. DHOKEY	Advancement of Materials Processing Technology, NIT Jamshedpur, 31 Oct- 2 Nov 2020	National
6	A STUDY ON FABRICATION AND ELECTRICAL PROPERTIES OF LI1+XALXTI2-X(PO4)3 GLASS CERAMICS AS SOLID-STATE	PARTH A. RATHI1 , SIDDHI A. RATHOD1 , KAUSTUBH R.	Advancement of Materials Processing Technology, NIT Jamshedpur, 31 Oct- 2 Nov 2020	National

	ELECTROLYTES IN LI-ION BATTERIES	KAMBALE		
7	CREEP PROPERTIES OF MWCNTS REINFORCED HIGH PERFORMANCE POLY (ETHER-KETONE) POLYMER NANOCOMPOSITES	M. G. KULTHE1*, S. RAMTEKE2, R.K.GOYAL3 , S.P. BUTEE	Advancement of Materials Processing Technology, NIT Jamshedpur, 31 Oct- 2 Nov 2020	National
8	MICROSTRUCTURAL ASPECTS OF TENSILE STRENGTH, TOUGHNESS AND WEAR FOR 34CRMO4 STEEL	ARUN S.THAKARE1* , S.P.BUTEE2 , K.R. KAMBALE	Advancement of Materials Processing Technology, NIT Jamshedpur, 31 Oct- 2 Nov 2020	National
9	INVESTIGATION OF EFFECTS OF DIFFERENT HEAT TREATMENT CYCLES COMBINED WITH QUENCHING PARTITIONING TREATMENT ON MECHANICAL PROPERTIES OF HIGH CARBON HIGH SILICON STEEL	PRAKASH G. RANAWARE* MANOJ J. RATHOD	Advancement of Materials Processing Technology, NIT Jamshedpur, 31 Oct- 2 Nov 2020	National

PUBLICATIONS IN INTERNATIONAL CONFERENCES

Sr. No.	Title of the Paper	Authors	Publication Details/Vol. No.	National/ International
1	FABRICATION OF PURE ALUMINIUM REINFORCED GRAPHENE COMPOSITE FOR HEAT SINK APPLICATIONS	KAVYA VENU PILLAI, VAISHNAVI VIJAY NERPAGAR, AND NARENDRA DHOKEY	Sustainable Energy, Environment and Green Technologies (ICSEEGT2021) ICSEEGT2021-AU-1018	International
2	Modelling of oxidation phenomenon of mill-scale and analysis of influencing parameters	P.C. Jikar, N.B. Dhokey	Advances in Materials Processing & Manufacturing Applications (iCADMA 2020) , Nov 5-6 2020, Materials Today: Proceedings	International
3	Overview on production of reduced iron powder from	P.C. Jikar, N.B.	Materials Today: Proceedings	International

	mill scale waste	Dhokey		
4	Study of hot pressed sintering of premixed Al7075 based B4C reinforced composites on wear mechanism	N.B. Dhokey, S.U. Dangrikar	Advances in Materials Processing & Manufacturing Applications (iCADMA 2020) , Nov 5-6 2020, Materials Today: Proceedings, https://doi.org/10.1016/j.matpr.2020.11.255	International
5	Evaluation of mechanical properties of cold roll bonded mild steel and aluminum	V. Poddar, M.J. Rathod	CRMSSC 2021, Materials Today: Proceedings	International
6	Investigation of nanocrystallization behaviour of AISI 316 stainless steel under adiabatic and non-adiabatic severe plastic deformation	P. Ranaware. M.J. Rathod, Chaitanya Bakare	Materials Today: Proceedings	International
7	Wear behavior and machinability of hot pressed sintering of B4C reinforced M3/2 HSS composite	V.T.Thavale, N.B.Dhokey	Advances in Materials Processing & Manufacturing Applications (iCADMA 2020) , Nov 5-6 2020, Materials Today: Proceedings	International
8	High electromagnetic interference shielding of poly(ether-sulfone)/multi-walled carbon nanotube nanocomposites fabricated by an eco-friendly route	R. Verma, R,K, Goyal, M.J. Rathod	IOP Science Nanotechnology, 31(38), July 2020, DOI: 10.1088/1361-6528/ab97d3	International
9	Improved Process for Synthesizing n-type and p-type β -FeSi ₂ Thermoelectric Material from Attritor Milled Powder	V.Poddar, N.B. Dhokey, S.P. Butee	Materials Today: Proceedings	International
10	Improvement in Mechanical Properties of 42CrMo4 Steel	A.S. Thakre, S.P.Butee, K.R.	Metallography, microstructure, and analysis – Springer, DOI	International

	Through Novel Thermomechanical Processing Treatment	Kamble	10.1007/s13632-020-00684-9	
11	Microstructural aspects of tensile strength, toughness and wear for 34CrMo4 steel	A.S. Thakre, S.P. Butee, K.R. Kamble	Materials Today: Proceedings	International
13	Wear Behaviour of Nano- and Micro-Y2O3 dispersed SS316L PM Structural Steels	P.S. Yadav, S.P. Butee	Materials Today: Proceedings	International
14	Overview on Hardfacing Processes, Materials and Applications	R. Garbade, N. B. Dhokey	Advances in Materials Processing & Manufacturing Applications (iCADMA 2020) , Nov 5-6 2020, IOP Conference Series: Materials Science and Engineering	International
15	Formulation of mathematical model for improved heat transfer in heat sink electronic system	Satyam Sastare [†] , Harshada Bhand, N.B. Dhokey	International Conference on "Cutting-edge Research in Material Science and Chemistry	International
16	Dimensionless model and performance analysis of low temperature thermoelectric materials	Vismay Chandra , Taher Balasinorwala, N.B. Dhokey	International Conference on "Cutting-edge Research in Material Science and Chemistry	International



NATIONAL / INTERNATIONAL CONFERENCES / SEMINAR / SYMPOSIA / WORKSHOP ATTENDED DURING LAST ACADEMIC YEAR.

Name of Department	National Conferences Attended	International Conferences Attended	Workshop Attended	Seminar Attended	Total
Metallurgy Engineering	07	09	37	00	53

International Conferences Attended

Sr. No	Title of the Paper	Title of the Conference	Name of the Faculty	Period	Venue
1	Study of Hot-Pressed Sintering of Premixed Al7075 Based B4C Reinforced Composites on Wear Mechanism	International Conference on Advances in Materials Processing & Manufacturing Applications (iCADMA 2020)	Prof. S. U. Dangrikar	November 5-6, 2020	Online, NIT UK
2	Wear Behavior and Machinability of Hot Pressed Sintering of B4C Reinforced M3/2 HSS Composite	International Conference on Advances in Materials Processing & Manufacturing Applications (iCADMA 2020)	Prof. V. T. Thavale	November 5-6, 2020	Online, NIT UK
3	Modelling of oxidation phenomenon of mill-scale and analysis of influencing parameters	International Conference on Advances in Materials Processing & Manufacturing Applications (iCADMA 2020)	Prof. N. B. Dhokey	November 5-6, 2020	Online, NIT UK
4	Dimensionless model and performance analysis of low temperature thermoelectric materials	International Conference on "Cutting-edge Research in Material Science and Chemistry	Prof. N. B. Dhokey	January 11-12, 2021	Department of Chemistry and Biosciences, School of Basic Sciences, Manipal University Jaipur
5	Improved Process for Synthesizing n-type and p-type β -FeSi ₂ Thermoelectric Material from Attritor	International Conference on "Cutting-edge Research in Material	Dr. V. S. Poddar	January 11-12, 2021	Department of Chemistry and Biosciences,

	Milled Powder	Science and Chemistry			School of Basic Sciences, Manipal University Jaipur
7	Improved Process for Synthesizing n-type and p-type β -FeSi ₂ Thermoelectric Material from Attritor Milled Powder	International Conference on "Cutting-edge Research in Material Science and Chemistry	Dr. S. P. Butee	January 11-12, 2021	Department of Chemistry and Biosciences, School of Basic Sciences, Manipal University Jaipur
8	Evaluation of mechanical properties of cold roll bonded mild steel and aluminum	International Conference on "Cutting-edge Research in Material Science and Chemistry	Dr. M. J. Rathod	January 11-12, 2021	Department of Chemistry and Biosciences, School of Basic Sciences, Manipal University Jaipur
9	Investigation of nanocrystallization behaviour of AISI 316 stainless steel under adiabatic and non-adiabatic severe plastic deformation	International Conference on "Cutting-edge Research in Material Science and Chemistry	Dr. P. G. Ranaware	January 11-12, 2021	Department of Chemistry and Biosciences, School of Basic Sciences, Manipal University Jaipur

National Conferences Attended

Sr. No	Title of the Conference	Name of the Faculty	Period	Venue
1	Advancement in Material Processing Technology (AMPT-2020)	Dr. S. P. Butee	31 Oct – 2 Nov 2020	NIT Jamshedpur
2	Advancement in Material Processing Technology (AMPT-2020)	Dr. V. S. Poddar	31 Oct – 2 Nov 2020	NIT Jamshedpur
3	Advancement in Material Processing Technology (AMPT-2020)	Prof. M. G. Kulthe	31 Oct – 2 Nov 2020	NIT Jamshedpur
4	Advancement in Material Processing Technology (AMPT-2020)	Prof. K. Kambale	31 Oct – 2 Nov 2020	NIT Jamshedpur
5	Advancement in Material Processing Technology (AMPT-2020)	Dr. N. B. Dhokey	31 Oct – 2 Nov 2020	NIT Jamshedpur
6	Advancement in Material Processing Technology (AMPT-2020)	Dr. P. G. Ranaware	31 Oct – 2 Nov 2020	NIT Jamshedpur
7	Advancement in Material Processing Technology (AMPT-2020)	Dr. M. J. Rathod	31 Oct – 2 Nov 2020	NIT Jamshedpur

Workshop Attended

Sr. No.	Title of the Workshop	Name of the Faculty	Duration and Period	Venue
1.	Awareness Webinar on Outcome Based Education and Accreditation	Prof. K. Kambale	27 Nov 2020	COEP

2.	Streamlining Engineering curriculum for NEP-2020 and Management of Teaching Learning in Online Education	Dr. S. P. Butee	Sept 11-13 2020	IIT Kharagpur, Online Mode
3.	online workshop on Universal Human Value on the theme "Inculcating Universal Human Values in Technical Education"	Dr. V. S. Poddar	19-23 October, 2020	All India Council for Technical Education(AICTE).
4.	Advances in Materials Manufacturing, Processes and Properties	Dr. V. S. Poddar	6-10 July 2020	MNIT, Jaipur
5.	Advances in Materials Manufacturing, Processes and Properties	Prof. M. G. Kulthe	6-10 July 2020	MNIT, Jaipur
6.	Education, Teaching & learning Techniques, Pedagogical methods	Prof. M. G. Kulthe	27 July-1 Aug 2020	ICT Academy
7.	Education, Teaching & learning Techniques, Pedagogical methods	Shree V. T. Thavle	27 July-1 Aug 2020	ICT Academy
8.	Education, Teaching & learning Techniques, Pedagogical methods	Shree K. R. Kambale	27 July-1 Aug 2020	ICT Academy
9.	Education, Teaching & learning Techniques, Pedagogical methods	Dr. Abhishek M. More	27 July-1 Aug 2020	ICT Academy
10.	Education, Teaching & learning Techniques, Pedagogical methods	Mrs. S. U. Dangarikar	27 July-1 Aug 2020	ICT Academy
11.	Education, Teaching & learning Techniques, Pedagogical methods	Dr. S. P. Butee	27 July-1 Aug 2020	ICT Academy
12.	Education, Teaching & learning Techniques,	Dr. M. J. Rathod	27 July-1 Aug 2020	ICT Academy

	Pedagogical methods			
13.	Education, Teaching & learning Techniques, Pedagogical methods	Dr. S.T. Vagge	27 July-1 Aug 2020	ICT Academy
14.	Education, Teaching & learning Techniques, Pedagogical methods	Dr. P. P. Deshpande	27 July-1 Aug 2020	ICT Academy
15	Education, Teaching & learning Techniques, Pedagogical methods	Dr. P. G. Ranaware	27 July-1 Aug 2020	ICT Academy
16	Education, Teaching & learning Techniques, Pedagogical methods	Dr. Madhu Ranjan	27 July-1 Aug 2020	ICT Academy
17	Education, Teaching & learning Techniques, Pedagogical methods	Dr. Samarbijay Sarkar	27 July-1 Aug 2020	ICT Academy
18	Education, Teaching & learning Techniques, Pedagogical methods	Mrs. Rishika Verma	27 July-1 Aug 2020	ICT Academy
19	Education, Teaching & learning Techniques, Pedagogical methods	Shree R. S. Ranade	27 July-1 Aug 2020	ICT Academy
20	OBE and Accreditation	Mrs. M. G. Kulthe	27 Nov 2020	ICT Academy
21	OBE and Accreditation	Shree V. T. Thavle	27 Nov 2020	ICT Academy
22	OBE and Accreditation	Dr. V. S. Poddar	27 Nov 2020	ICT Academy
23	OBE and Accreditation	Dr. Abhishek M. More	27 Nov 2020	ICT Academy
24	OBE and Accreditation	Mrs. S. U. Dangarikar	27 Nov 2020	ICT Academy
25	OBE and Accreditation	Dr. S. P. Butee	27 Nov 2020	ICT Academy
26	OBE and Accreditation	Dr. M. J. Rathod	27 Nov 2020	ICT Academy
27	OBE and Accreditation	Dr. S.T. Vagge	27 Nov 2020	ICT Academy

28	2-Weeks Comprehensive Online Patent Information Course	Dr. V. S. Poddar	August 2020	Turnip Innovations
29	Live Training Sessions with Thermo-Calc	Dr. V. S. Poddar	24-28 Aug 2020	IIT Madras
30	FDP - Advances in Thermo-Mechanical Processing of Materials (ATPM-2020)	Dr. V. S. Poddar	14-18 Dec 2020	Dept. of Metallurgy and Materials Science, Online Mode
31	FDP - Advances in Thermo-Mechanical Processing of Materials (ATPM-2020)	Prof. M. G. Kulthe	14-18 Dec 2020	Dept. of Metallurgy and Materials Science, Online Mode
32	FDP - Advances in Thermo-Mechanical Processing of Materials (ATPM-2020)	Prof. A. P. Pacharne	14-18 Dec 2020	Dept. of Metallurgy and Materials Science, Online Mode
33	FDP - Advances in Thermo-Mechanical Processing of Materials (ATPM-2020)	Prof. S. U. Dangrikar	14-18 Dec 2020	Dept. of Metallurgy and Materials Science, Online Mode
34	FDP - Advances in Thermo-Mechanical Processing of Materials (ATPM-2020)	Prof. V. T. Thavale	14-18 Dec 2020	Dept. of Metallurgy and Materials Science, Online Mode
35	FDP - Advances in Thermo-Mechanical Processing of Materials (ATPM-2020)	Dr. P. G. Ranaware	14-18 Dec 2020	Dept. of Metallurgy and Materials Science, Online Mode
36	FDP - Advances in Thermo-Mechanical Processing of Materials (ATPM-2020)	Dr. A. M. More	14-18 Dec 2020	Dept. of Metallurgy and Materials Science, Online Mode
37	FDP - Advances in Thermo-Mechanical Processing of Materials (ATPM-2020)	Dr. M. J. Rathod	14-18 Dec 2020	Dept. of Metallurgy and Materials Science, Online Mode

**❖ NATIONAL / INTERNATIONAL CONFERENCES / SEMINAR / SYMPOSIA /
WORKSHOP ORGANIZED DURING LAST ACADEMIC YEAR**

Name of Department	National Conferences Organized	International Conferences Organized	Workshop Organized	Seminar Organized	Total
Metallurgy engineering	00	00	00	00	10
International Conferences Organized					
Sr. No.	Title of the Conference	Name of the Faculty	Period	Venue	
1	Nil				
National Conferences Organized					
Sr. No.	Title of the Conference	Name of the Faculty	Period	Venue	
1	Nil				
Workshop Organized					
Sr. No.	Title of the Workshop	Name of the Faculty	Period	Venue	
1	Powder Metallurgy Short Course (PMSC-20)	N.B.Dhokey, S. P. Butee, V. S. Poddar	26-29 Sept 2020	Online Mode, Department Of Metallurgy & Materials Science, COEP, PUNE	
2	FDP - Advances in Thermo-Mechanical Processing of Materials (ATPM-2020)	Dr. M. J. Rathod, Dr. A. M. More, Dr. P. G. Ranaware	14-18 Dec 2020	Online Mode, Department Of Metallurgy & Materials Science, COEP, PUNE	

Seminar Organized				
Sr. No.	Title of the Seminar	Name of the Speaker, Co-ordinator	Period	Venue
1	Wire Drawing Fundamentals and Testing	Shishir Desai, Dr. V. S. Poddar	29 Oct 2020	Online Mode
2	Composite Materials and its Application	Dr. R. K. Goyal, Prof. M. G. Kulthe	28 Oct 2020	Online Mode
3	Introduction for nanomaterials and nanotechnology	Dr. R. K. Goyal, Prof. R. Verma	4 Nov 2020	Online Mode
4	Extraction of rare earth metals	Dr.P. R .Khangaonkar, Dr. A. M. More	3 Nov 2020	Online Mode
5.	14 th Dr. Dara P. Antia Lecture: Prof. Sadoway	S. P. Butee, N.B.Dhokey	11 Sept 2020	Online Mode, Department Of Metallurgy & Materials Science, COEP, PUNE

❖ AWARDS & HONORS

● For Faculty

Sr. No	Name of the Faculty	Name of the Award / Honor	Description	No. of Awards
1	Dr N. B. Dhokey	Indian Institute of Metals Fellowship	Conferred on 24 Feb in virtual mode at IITB during 58 th NMD award ceremony and 74 th Annual Technical Meeting.	01
2	Prof. V. T. Thavale	Best Paper award in the Technical Session 22	Advances in Materials Processing & Manufacturing Applications (iCADMA 2020) , Nov 5-6 2020	01
3	Prof. Rishika Verma	Best Oral Presentation in the Technical Session V	International Conference on "Cutting-edge Research in Material Science and Chemistry (CRMSC-2021)" organized by Department of Chemistry and Biosciences, School of Basic Sciences, Manipal University Jaipur January 11-12, 2021	01
4	Dr. V. S.	Best Oral Presentation in the	International Conference on	01

	Poddar	Technical Session VII	“Cutting-edge Research in Material Science and Chemistry (CRMSC-2021)” organized by Department of Chemistry and Biosciences, School of Basic Sciences, Manipal University Jaipur January 11-12, 2021	
5	Dr. V. S. Poddar	1st Position in Suraksha: Sheeraz & Kaushik Memorial Safety Quiz	organized alongwith the National conference on Advancement in Material Processing Technology (AMPT-2020): Certificate and Cash prize of INR 3500/-	01

PhD Defended:

Project title	PhD Scholar	PhD Guide	Tenure	Date of Defense
Application of polyaniline in cathodic protection	Aniket B. Kolekar	Dr. P. P. Deshpande	May 2016-Nov 2020	6 Nov 2020
Effect of Thermomechanical Processing on Mechanical Properties of Precipitation Hardened Ferritic-Pearlitic (PHFP) Steels	Thakare Arun S.	Dr. S. P. Butee	May 2016-10th March 2021	10th March 2021
Preparation and Characterization of high performance polymer matrix composite for EMI shielding application	Dravid Sampada Viraj,	Dr. R. K. Goyal	14th July 2015-23rd March 2021	23rd March 2021

● SWAYAM / NPTEL Courses attended by Faculty

Sr. No.	Faculty Name	Course Attended	Semester Details
1	PRAKASH RANAWARE	Materials Science and Engineering	Jan-March 2021 (8 week)
2	PRAKASH RANAWARE	Thermo-mechanical and Thermo-chemical Processes	Sept-Nov 2020 (8 week)
3	VAISHALI PODDAR	Fundamentals of Electronic Device Fabrication	Sept-Oct 2020 (4 week)

4	VAISHALI PODDAR	Powder Metallurgy	Sept-Dec 2021 (12 week)
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● **For Students**

Sr. No	Name of the student	Name of the Award/Achievement	Description	No. of Awards
1.	Shaunak Dhekane	2nd prize	in English Essay Writing Competition organized by COEP Debate and Quiz Club on 2 nd April 2021	01

❖ **DETAILS OF STUDENTS GONE FOR HIGHER STUDIES**

Name of the Student	Name of the University/ institute		Year of Passing
	Foreign	Indian	
To be filled up			
Shivde Sujoy	University of California, San Diego (UCSD) for Masters in Nanotechnology, with Research		2021
Vismay Chandra	Masters at Georgia Institute of Technology, Specialization in 'Energy Storage and Harvesting Technology'		2021
Aman Kshirsagar	College of Engineering and Applied Science at the University of Cincinnati		2020
Padmanabh Chavan	Masters Metallurgical Engineering at RWTH Aachen University, Germany		2020
Neeta Kamat		NITIE	2021

❖ DETAILS OF STUDENTS' INTERNSHIP PROGRAMME:

Sr. No.	Name of the Student	Year (Sy/ Ty/ Final Year)	Name of the Organization where the students has done internship	Duration	Stipend received in Rs. (if applicable)
Department of Metallurgy and Materials Science					
1	DEOMORE SRISHTI AVINASH	TY	EnGenius metals Pvt. Lmt	1 month	0
2	JAJU PRAGATI SHRINIVAS	TY	Forbes Marshall	1 month	0
3	JUNNE GURUNATH PARMESHWAR	TY	Pokale Patil industries	1 month	0
4	ANIKET KAILAS DEOKAR	TY	Om Forge	1 month	0
5	LANGOTE BHUSHAN KISNAJI	TY	EKTA CASTING,Hingna MIDC,Nagpur	1 month	0
6	NAIR ANJALI	TY	Forbes Marshall	1 month	0
7	PANDE AISHWARYA RAJKUMAR	TY	Jadhaos gears Pvt limited	1 month	0
8	PESHAVE SUYASH MUKUND	TY	Avi Oilless Die Components India Pvt Ltd.,Velu, Bhor, Pune	1 month	0
9	THOKAL PRAFULL DATTU	TY	Kinetic Engineering Limited, Ahmednagar	1 month	0
10	ARYAN JAIN	TY	Tata Motors Maval Foundry	1 month	0
11	SHUDHANSHU SINGH	TY	United Enterprises, Badlapur Area,Thane	1 month	0
12	ROHINI VINOD SATPUTE	TY	Tool India, MIDC Hingna Road, Nagpur	1 month	0
13	SHRAVANI PRAMOD DATIR	TY	Tool India, MIDC Hingna Road, Nagpur	1 month	0
14	RAJGADKAR RAHUL SUBHASH	TY	Prime Steels, Nagpur	1 month	0
15	WADE VIKRANT PRAVIN	TY	Prime Steels, Nagpur	1 month	0
15	WAGHMARE ANIKET VINOD	TY	Prime steel trader PVT.LTD	1 month	0

16	AJAY SOMLAL MADAVI	TY	Prime steel trader PVT.LTD	1 month	0
17	ANAND MUNINDRA DETHE	TY	Prime Steels, Nagpur	1 month	0
18	ONKAR NAVASU RERA	TY	Prime steel trader PVT.LTD	1 month	0
19	PUNDKAR VAIBHAV SAHEBRAO	TY	Prime steel trader PVT.LTD	1 month	0
20	YASH KESHAORAO HEDAHO	TY	Prime Steels , Nagpur	1 month	0
21	GHATGE ABHISHEK KESHAV	TY	Rajkumar Forge Limited , Chakan.	1 month	0
22	HRISHIKESH SHRIDHAR DEODHAR	TY	Rajkumar Forge Limited , Chakan.	1 month	0
23	ADITYA MAHENDRA SATPUTE	TY	Kalika Steel Pvt Ltd, Jalna	1 month	0
24	KIRAN TATYABHAU GAIKWAD	TY	Om Forge	1 month	0
25	ROHAN KISHOR MAGAR	TY	Rajkumar Forge Limited , Chakan.	1 month	0
26	SAHIL MOHD ANEES SHAIKH	TY	S.N. Casting Pvt. Ltd. Chakan	1 month	0
27	MRUDUL SANDIP PARASNIS	TY	Armanet Research Development Establishment(DRDO)	1 month	0
28	SAKSHI RAJENDRA HARIBHAKT	TY	Tarini Steel Company Ltd., MIDC Kurkumbh	1 month	0
29	KOTHAWADE SUMEDH RAVINDRA	TY	Unique Treatments	1 month	0
30	AISHWARYA RAJENDRA MULAWEKAR	TY	Kohinoor Ropes Pvt Ltd, Selu. Dist. Parbhani	1 month	0
31	AMAN SANJAY ZAMBAD	TY	Balaji Electro Smelters pvt. Ltd,Yavatmal	1 month	0
32	AMAR VITHALRAO KHEDKAR	TY	Supreme Gold Ltd.	1 month	0
33	ATHARV SURESH NICHAL	TY	Verensol Technologies Pvt Ltd	1 month	0

34	SHUBHAM PRAKASH KODARE	TY	Perfect Tooling	1 month	0
35	PRIYA PADMAKAR BIRADAR	TY	Vaibhav Industries, Latur	1 month	0
36	ROHAN PAWANKUMAR AGRAWAL	TY	Apple Sponge & Power Ltd,Kolhapur	1 month	0
37	KADBE ABHAY ISHWAR	TY	Kapilansh Dhatu Udyog (P),Ltd, Nagpur	1 month	0
38	PAWAN BANG	TY	Som Autotech	1 month	0
39	VENKATESH SANJAY VAHADANE	TY	Som Autotech	1 month	0
40	MESHARAM SHRADDHA TRISARAN	TY	Kapilansh Dhatu Udyog (P),Ltd, Nagpur	1 month	0
41	RANADE DAYANAND SANJAY	TY	Kapilansh Dhatu Udyog (P),Ltd, Nagpur	1 month	0
42	SAHARKAR MAHIMA MAHESH	TY	Kapilansh Dhatu Udyog (P),Ltd, Nagpur	1 month	0
43	SURYAWANSHI SANDESH NARESH	TY	Kapilansh Dhatu Udyog (P),Ltd, Nagpur	1 month	0
44	ZADE VAIBHAV	TY	Kapilansh Dhatu Udyog (P),Ltd, Nagpur	1 month	0
45	YASH RAMKRISHNA KATKADE	TY	Taparia Tools Ltd , Nashik	1 month	0
46	PATHAN HABIB KADARKHA	TY	Om Forge	1 month	0
47	GAURANG ASHOK RASKAR	TY	Western Heat & Forge Ltd., PCMC	1 month	0
48	PHASE ADITYA MAHENDRA	TY	Nikam Precision Cast	1 month	0
49	KADAM AKSHATA YASHWANT	TY	Vanaz Engineers Limited	1 month	0
50	SANGALE RUTUJA SHANKAR	TY	Vanaz Engineers Limited	1 month	0
51	KRUTIKA PANDURANGJI GHUMADE	TY	Metamorphic Heat Treatment,Pune	1 month	0

52	RAHUL Sampat Bhingardeve	TY	Suyash iron & Steel Pvt.Ltd,Miraj	1 month	0
53	SHRUTI Anil Gade	TY	Shiv Alloy Casting, Ahmednagar	1 month	0
54	NAYANA BHATESING CHAURE	TY	Pune Heat, Bhosari, Pune	1 month	0
55	Rishabh Motiramji Thakre	TY	Caspro metal industries Kolhapur	1 month	0
56	Vishal Kishanrao Ghule	TY	Indrani Heat Treaters, Kolhapur	1 month	0
57	Swapnil Shankarrao Meghmale	TY	Metamorphic Heat Treatment,Pune	1 month	0
58	PRADNYA NITIN ASHTEKAR	TY	Avi Oilless Die Components India Pvt Ltd.,Velu, Bhor, Pune	1 month	0
59	ADITYA SHRIKANT BHAVE	TY	Avi Oilless Die Components India Pvt Ltd.,Velu, Bhor, Pune	1 month	0
60	SIDDHESH PRASAD JOSHI	TY	Bajaj Auto Limited, Akurdi, Pune	1 month	0
61	RAHUL KRISHNA PANDE	TY	DECK INDIA ENGINEERING PVT. LTD.	1 month	0
62	ROHAN AMOL PADILE	TY	DECK INDIA ENGINEERING PVT. LTD.	1 month	0
63	RASHINKAR KEDAR RAOSAHEB	TY	Perfect Tooling	1 month	0
64	THAKUR KAPIL SURESH	TY	Perfect Tooling	1 month	0
65	VISHWAJEET DHANANJAY DESHMUKH	TY	Perfect Tooling	1 month	0

❖ SPECIAL MENTION

❖ MEMBERSHIPS TO SOCIETIES

Sr. No	Name of the Society	Name of the faculty/s
1	IIM National Council Nomination	Dr. S. P. Butee
2	INCERS National Council Member	Dr. S. P. Butee
3	IIM Pune Chapter, Secretary	Dr. V. S. Poddar

❖ FACULTY MEMBER

Sr. No.	Name of the Faculty	Highest Qualification	Designation	Areas of Interest
1.	Dr. S. P. Butee	Ph.D.	Professor & Head	Electro-Ceramics, Characterization techniques
2..	Dr. N. B. Dhokey	Ph.D.	Professor	Tribology, Powder metallurgy, Energy Materials, Soft Magnetic materials, Cryotreatment of materials
3.	Dr. M. J. Rathod	Ph.D.	Professor	Material joining and Laser material processing
4.	Dr. S. T. Vagge	Ph.D.	Professor	Corrosion and Surface Engg.
5.	S. U. Dangrikar	M.E.	Assistant Professor	Heat Treatment, Metal Working
6.	Dr. P. P. Deshpande	Ph.D.	Assistant Professor	Conducting polymers and corrosion control of Steels
7.	V. T. Thavale	M.E. (Metallurgy)	Assistant Professor	Powder Metallurgy, Nuclear Materials, Foundry Technology
8.	M. G. Kulthe	M.E. (Metallurgy)	Assistant Professor	Polymer matrix micro and nano composites
9.	R. S. Ranade (expired on 4 February 2021)	M.E. (Metallurgy)	Assistant Professor	Foundry Technology, Extractive Metallurgy, Non Destructive Testing
10.	Dr. A. M. More	M. Tech.	Assistant Professor	Physical Metallurgy, Metal Forming
11.	K. Kamble	M.Tech	Assistant Professor	Ceramic processing, Electroceramics, ionic conductors, composite materials
12.	Dr. S. B. Sarkar	Ph.D.	Emeritus Professor	Fatigue and Fracture Study, Advanced Steel Making
13.	Dr. Madhu Ranjan	Ph.D.	Emeritus Professor	Forging Technology, Materials Joining, Metal Working

14.	Dr. V. S. Poddar	M.Tech	Associate Professor	Wire Tech, Electronic and Magnetic Materials, Materials Characterization
15.	Dr. P. G. Ranaware (left the institute on 30 April 2021)	Ph.D.	Adjunct Faculty	Heat Treatment, Mathematical modeling of materials
16.	Rishika Verma (expired on 22 May 2021)	M.Tech	Adjunct Faculty	Nanomaterials, Polymer composites
17.	Dr. P. R. Khangaonkar	Ph.D.	Visiting Faculty	Physical Metallurgy

GATE 2021 Result:

Sr. No.	Name as mentioned in the GATE result	MARKS OUT OF 100	All India Ranking (AIR)	GATE SCORE
1	Neeta Rajendra Kamat	80.67	19	821
2	Nalin Rakesh Singh	72.33	88	699
3	AMEY VIJAY KULKARNI	70	117	664
4	GANESH MAHADEV NIGUDAGE	67	164	621
5	SUBHAM KUMAR GUPTA	65.33	198	596
6	Fouziya Anjum Mohammad Farooque	64.33	219	582
7	VAISHNAVI PADMAKUMAR MENON	61.67	277	543
8	Sanket Kundlik Lothe	61.33	284	538
9	SATYAM SAMBHAJI SASTARE	59	334	504
10	PRATIK SUNILRAO DESHPANDE	57	375	474
11	PARTH ASHISH RATHI	49.67	570	367
12	SHRUTI RAJENDRA DIWASE	39.67	955	221
13	Hrishikesh Kishor Sabade	30.23	9960	400