

# **DEPARTMENT OF METALLURGY & MATERIALS SCIENCE**

## **(2017-2018)**

### **❖ 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 twelve 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 30 students registered for Ph.D. program.

### **❖ 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**

<b>Sr. No</b>	<b>Designation</b>	<b>No. of Faculty</b>
1	Professor	03
2	Steel Chair Professor	01
3	Emeritus Professor	01
4	Associate Professor	03

5	Assistant Professor	07
6	Visiting Faculty	02
7	Adjunct Faculty	03
Total		20

## ❖ 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 analyser, 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.

### ❖ EQUIPMENT PURCHASED:

Name of the Lab/ section	Module Description	Usage	Date of purchase / development dd/mm/yyyy	Resource consumed (amount in Lakhs)
Click2cast software				4 lakh

### ❖ RESEARCH & DEVELOPMENT ACTIVITIES

Sr. No	Research Activities	Total No.
1	No. of Books Authored	01
2	No. of Conference/Seminars/ workshops attended	53
3	No. of Conference/Seminars/ workshops organized	15

4	No. of publications in International/National Journals and conference	32
5	No. of the Industry Sponsored Projects	00
6	No. of Government Sponsored Projects	06
7	Value of the Government Sponsored Projects (In Lakhs)	86.98
8	No. of Consultancy Projects	10
9	No. of Students gone to foreign universities for further studies	04
10	No. of Ongoing Ph. Ds	30

### ❖ Details of Sponsored Research Projects

Sr. No	Title	Name of the Project Leader	Year in which started	Funding agency	Duration	Amount sanctioned (Rs)
1	Wear corrosion and impact toughness of high N mart. SS (XD15NW)	Dr. N. B. Dhokey	2017	ISRO		15,00,000/-
2	Corrosion behaviour study of nanoparticle containing coating for Aluminium Alloys	Dr. S. T. Vagge	2017	Alumni Association		1,15,500/-
3	Synthesis and characterization of LTA / YSZ double layer thermal barrier coating and their variants with respect to their corrosion and oxidation resistance.	Dr. S. T. Vagge	2017	DST		33,84,480/-
4	Development of Al nitride & alumina based ceramics for high temp electrical insulation.	Prof. K. Kambale	2017	ISRO		9,47,600/-
5	Polymer / Ceramic nanocomposites substrate for Microwave Communication Applications	Dr. R. K. Goyal	2017	Alumni Association		1,50,000/-
6	Synthesis, Design and Development of Al7075 - 10%wt Gr	Dr.N. B. Dhokey	2017	NRB-DRDO		26,00,000/-

7	Development of La <sub>2</sub> Ti <sub>2</sub> O <sub>7</sub> Ceramics for High Temperature Piezoelectric Applications	Prof. K. Kambale	2017	Alumni Association	1,05,000/-
8	Design & Fabrication of Cathodic Protection System based on Impressed Current Technology	Dr. P.P.Deshpande	2017	Alumni Association	60,000/-

### ❖ Details of Consultancy Projects:

Sr. No	Title	Name of the Project Leader	Year in which started	Name of Consultancy	Consultancy Amount (Rs)
1	Investigation of VCI film and Al laminates	P.P.Deshpande and R.K.Goyal	2017	Aditya Packaging and Consultancy Services	53100/-
2	Investigation of Plastic sample	R.K.Goyal	2017	Mecheline Techno-Plast Corporation	12000/-
3	Alloy steel: Pitting potential determination by cyclic polarization and corrosion rate measurements using Tafel extrapolation technique	P.P.Deshpande	2017	Bharat Forge Limited	306800/-
4	Evaluation of wear resistance properties of sugar industry rollers	N. B. Dhokey	2017	S.B.Reshellers Pvt. Ltd.	68832/-
5	Quality check of food grains air-tight storage container as per the technical specifications	N. B. Dhokey	2017	Shikshan Sanchalak (Prathamik) Tatha Adhyaksh Rajstariya Kharedi Samiti Maharashtra Rajya, Pune -01	51405/-
6	Evaluation of wear resistance properties of sugar industry	N. B. Dhokey	2017	S.B.Reshellers Pvt. Ltd.	82600/-

	rollers				
7	Characterization of 3D printed Nickel based super alloy plate	N. B. Dhokey	2017	EATON Corp. India	44840/-
8	Synthesis of the cathode and anode materials for Na-ion batteries using sintering and milling process	N. B. Dhokey	2017	KPIT Tech. Ltd.	88500/-
9	Develop a wear map for medium carbon and Boron containing steel for optimum conditions of wear	N. B. Dhokey	2017	John Deere India Ltd.	413000/-
10	Surface crack formation on Ball Race ring	M.J.Rathod, P.G.Ranaware	2018	Sai Industries	11800/-

## ❖ PUBLICATIONS

Sr. No	Name of Department	Research Publications				Total
		National Journal	International Journal	National Conference	International Conference	
1	Metallurgy Engineering	01	16	01	14	32

National Journals (2017-2018): 01				
Sr. No	Title of the Paper	Authors	Publication Details/Vol.No./ISSN No./ Page No.	National/ International
1	Fabrication of Thermoelectric Generator for high temperature application using unicouples made from p-type and n-type $\beta$ -Iron disilicide	R.Garbade, V. S. Poddar, N. B. Dhokey, D. Prakash, R. D. Purohit	TRANSACTIONS OF PMAI, VOL. 43 (1), JUNE 2017	<b>National</b>

**International Journals (2017-2018): 16**

<b>Sr. No</b>	<b>Title of the Paper</b>	<b>Authors</b>	<b>Publication Details/Vol.No./ISSN No./ Page No.</b>	<b>National/ International</b>
1	Influence of carbide density on surface roughness and quasi-stable wear behaviour of H13 die steel	Tarang Shinde, N. B. Dhokey	Surface Engineering	International
2	Evolution of Tertiary Carbides and Its Influence on Wear Behavior, Surface Roughness and Fatigue Limit of Die Steels	Tarang Shinde, N. B. Dhokey	Springer Proceeding: Fatigue and Durability in 2016, 28-30 Sept 2016, IISc, Bangalore	International
3	Influence of tertiary carbides on improving fatigue limit of H13 Die Steels	Tarang Shinde, N. B. Dhokey	Metallography, Microstructure and Analysis: Application and Innovation for Metals, Alloys and Engineering Materials	International
4	EVALUATION OF CORROSION PROTECTION PERFORMANCE OF CONDUCTING POLYANILINE/NANOZINC PHOSPHATE COATED LOW CARBON STEEL BY IMPEDANCE SPECTROSCOPY	Pravin Deshpande, Abhijit Bhopale, Vandana Mooss, Anjali Athawale	U.P.B. Sci. Bull., Series B, Vol. 79, Iss. 4, 2017	International
5	Electromagnetic Interference Shielding of Polycarbonate/GNP Nanocomposites in X-band	Pratik Nimbalkar, Amit Korde, R. K. Goyal	Mater Chem Phys, 206 (2018) doi.org/10.1016/j.matchemphys.2017.12.027	International
6	Effect of manufacturing processes on percolation threshold and electrical conductivity of polymer/multi layers graphene nanocomposites	S. D. Gaikwad, R. K. Goyal	Diamond and related Materials, 85 (2018), doi.org/10.1016/j.diamond.2018.03.029	International

7	Effect of Scandium addition on evolution of microstructure, texture and mechanical properties of thermo-mechanically processed Al-Li alloy AA2195	M. Suresh, A. Sharma, A.M. More, N. Nayan, S. Suwas	Journal of Alloys and Compounds, 740 (2018) 364-374	International
8	Effect of addition of V <sub>2</sub> O <sub>5</sub> on the densification, dielectric and ferroelectric behavior of lead free potassium sodium niobate ceramics	K. R. Kambale, Sameer Shroff, S. P. Butee, Rajan Singh & A. R. Kulkarni	Ferroelectrics, 2017, VOL. 518, 94–102	International
9	Novel polyacrylonitrile/potassium sodium niobate composites with superior dielectric and thermal properties	K. R. Kambale, R. K. Goyal, S. P. Butee, R. Parsewar, H. Gawade, S. Shroff	Composites Communications 5 (2017) 8–12	International
10	Effect of post-sinter annealing on the properties of ceramics	K.R. Kambale and S.P. Butee	Metal Powder Report Volume 00, Number 00 March 2017	International
11	EFFECTS OF CHLORIDE IONS ON THE CORROSION RESISTANCE OF CONDUCTING POLYPYRROLE COATED STEEL IN SIMULATED CONCRETE PORE SOLUTION	Hema MUNOT, Pravin DESHPANDE, Chetankumar MODHERA	U.P.B. Sci. Bull., Series B, Vol. 79, Iss. 2, 2017	International
12	INQUEST OF STRUCTURAL AND OPTICAL PROPERTIES IN SINGLE PHASE LAPO <sub>4</sub> :TB <sub>3+</sub> NANO PHOSPHOR FOR MULTICOLOR EMITTING LEDS	Abhilasha Jain, Prashant Kumar Gaikwad, Bilal Pirjade, Chahat Saiwal, S.J Dhoble, D.R Peshwe	Journal of Research in Engineering and Applied Sciences	International



13	High Temperature Uniaxial Compression and Stress–Relaxation Behavior of India-Specific RAFM Steel	NAIMISH S. SHAH, SAURAV SUNIL, and APU SARKAR	METALLURGICAL AND MATERIALS TRANSACTIONS A	International
14	Influence of Cryosoaking period on Wear characteristics and surface Topography of M35 Tool Steel	N. B. Dhokey, Priyanka Lalge	Tribology – Materials, Surfaces & Interfaces	International
15	Conducting Polypyrrole Coated Rebar in a Carbonated Concrete Pore Solution: Electrochemical Investigations	H. Munot, P. Deshpande, C. Modhera	Portugaliae Electrochimica Acta 2018, 36(5), 365-375	International
16	Nano-TiO <sub>2</sub> Phosphate Conversion Coatings – A Chemical Approach	Nilesh S. Bagal, Vaibhav S. Kathavate, and Pravin P. Deshpande	Electrochem. Energy Technol. 2018; 4:47–54	International

**National Conference (2017-2018): 01**

<b>Sr. No</b>	<b>Title of the Paper</b>	<b>Authors</b>	<b>Publication Details/Vol. No./ISSN No./ Page No.</b>	<b>National/ International</b>
1	Boron steel for Agricultural implements	N.B.Dhokey, A.Nanaware, T.Bastewad	National Conference on Wear in Agriculture Implements and Machinery: Design, Materials, Process & Performance held on 8-9 June 2018 at College of Engineering Pune	National

**International Conference (2017-2018): 14**

Sr. No	Title of the Paper	Authors	Publication Details/Vol. No./ISSN No./ Page No.	National/ International
1.	Piezoelectric and Ferroelectric Properties of Ba <sub>1-x</sub> Pb <sub>x</sub> TiO <sub>3</sub> , (x=0-0.1) Ceramics	Mohammed Faizan, S.P.Butee	EH-TACAG'17 81 <sup>st</sup> Annual session of Indian Ceramic Society and International conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses", 14-16 Dec 2017, COEP, Pune	International
2	Fabrication and Characterization of $\beta$ -FeSi <sub>2</sub> Thermoelectric device for high temperature application.	Bilal Pirjade, Onkar Khadse, V.Poddar, N.B.Dhokey	EH-TACAG'17 81 <sup>st</sup> Annual session of Indian Ceramic Society and International conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses", 14-16 Dec 2017, COEP, Pune	International
3	High Energy Density Ceramics for Shock Compressed Ferroelectric Generators	Priyangi Karajagikar, S.P.Butee	EH-TACAG'17 81 <sup>st</sup> Annual session of Indian Ceramic Society and International conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses", 14-16 Dec 2017, COEP, Pune	International
4	Synthesis, Fabrication and Electrical Characterisation of La <sub>2</sub> Ti <sub>2</sub> O <sub>7</sub> ceramics	Akash Mahajan, K.R. Kambale, S. P. Butee, T. Karthik, A.R. Kulkarni	EH-TACAG'17 81 <sup>st</sup> Annual session of Indian Ceramic Society and International conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses", 14-16 Dec 2017, COEP, Pune	International
5	Synthesis and Electrical Properties of Sodium Beta	Amruta Vairagade,	EH-TACAG'17 81 <sup>st</sup> Annual session of Indian	International

	Alumina Ceramics	Channabasav aju, S.P.Butee, Kaustubh Kamble	Ceramic Society and International conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses", 14-16 Dec 2017, COEP, Pune	
6	Failure Analysis: Metallurgical investigation of AISI 440 C used in space application	Naimish Shah, Kapil Arora, N.B.Dhokey	International Conference on Advanced Materials and Processes (ADMAT)-2017, Trivendrum, 14-16 Dec 2017	International
7	Estimation of creep properties by stress relaxation testing of RAFM steel	Naimish Shah, Apu Sarkar	IIM-NMD-ATM 2017, International symposium on "Lightweighting for defence, aerospace and transportation, 11-14 Nov 2017, BITS Pillani, Goa	International
8	Study of metallurgical factors in improving service life of wire drawing carbide dies using cryogenic treatment	Shreyas Joglekar, Divyansh Saxena, N.B.Dhokey	2017 Cryogenic Engineering Conference and International Cryogenic Materials Conference, 9 - 13 Jul 2017, Madison, WI, USA	International
9	Study of Cryogenic Treatment and CrN coating to enhance wear resistance of EN45 steel	T.B.Bastewad,S. H.Thakare, A.N.Nanaware N.B.Dhokey	IIM-NMD-ATM 2017, International symposium on "Lightweighting for defence, aerospace and transportation, 11-14 Nov 2017, BITS Pillani, Goa	International
10	Review On High Nitrogen Steel (HNS)	A.Upadhye, P.Lalge, N.Shah, N.B.Dhokey, Thomas Tharian	IIM-NMD-ATM 2017, International symposium on "Lightweighting for defence, aerospace and transportation, 11-14 Nov 2017, BITS Pillani, Goa	International
11	Synthesis of AA 7075 – 10W.t% Graphite Composites	N.S. Nevase, S.S. Padwal, A.C. Vishwakarma, N.B. Dhokey	IIM-NMD-ATM 2017, International symposium on "Lightweighting for defence, aerospace and transportation, 11-14 Nov 2017, BITS Pillani, Goa	International

12	Evolution of Tertiary Carbides and Its Influence on Wear Behavior, Surface Roughness and Fatigue Limit of Die Steels (Conference Proceeding)	Prof. N.B. Dhokey, T. Shinde	Proceedings of Fatigue, Durability and Fracture Mechanics, Jan 2018	International
13	Use of high-speed photography to track and analyze melt pool quality in selective laser sintering (Conference Proceeding)	Prof. M.J. Rathod, P.P. Rege, Sourin Ghosh	2nd International Conference on Computer Vision and Image Processing, 12 April 2018	International
14	Oxidation behavior of LTA/YSZ intermixed layer coating (Book Chapter)	Prof. S.T. Vagge, P. Purohit	Production, Properties, and Applications of High Temperature Coatings, January, 2018	International

## ❖ PATENTS

Sr. No.	Faculty / Students	Title	Application No. & Date	Status
1	Nil			

## ❖ BOOKS PUBLISHED

Sr. No.	Name of the author	Title of the book	Name of the publisher	Date of publication (DD/MM/YYYY)
1	Dr. R.K. Goyal	Nanomaterials and nanocomposites: Synthesis, Properties, Characterization Techniques and Applications (Book)	CRC Press	October 2017



**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	07	19	20	53

International Conferences Attended					
Sr. No	Title of the Paper	Title of the Conference	Name of the Faculty	Period	Venue
1	Fabrication of thermoelectric material-Manganese Silicide through powder metallurgy route and analysing its thermoelectric properties	IIM-NMD-ATM 2017, International symposium on "Lightweighting for defence, aerospace and transportation	V.S. Poddar, N.B.Dhokey	11-14 Nov 2017	BITS Pillani, Goa
2	Overview on Thermoelectric materials	International Conference on Powder Metallurgy & Particulate Materials + Exhibition	N.B.Dhokey, V.S.Poddar 10 80000	20-22 feb 2018	IIT, Bombay
3	Polymeric Nanocomposites Filled with Nanoparticles: Fabrication, Properties and Applications (Invited Talk)	International Conference on Nanostructured Materials in Polymers and Pharmaceutical Sciences (PolyTech - 2017), Pune, India	R. K. Goyal	Dec. 19 - 20, 2017	Bharati Vidyapeeth Deemed University, Pune
4	Effect of Ceramic Nanopowder on Mechanical and Thermal Properties of High Performance	EH-TACAG'17 81st Annual session of Indian Ceramic	R. K. Goyal	14-16 December 2017	College Of Engineering, Pune

	Polymeric Nanocomposites	Society and International conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses"			
5	Study on High Performance Nanocomposites for EMI Shielding Application	EH-TACAG'17 81st Annual session of Indian Ceramic Society and International conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses"	R. K. Goyal	14-16 December 2017	College Of Engineering, Pune
6	Polymer/Hydroxyapatite Nanocomposites: Fabrication and Properties	EH-TACAG'17 81st Annual session of Indian Ceramic Society and International conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses"	R. K. Goyal	14-16 December 2017	College Of Engineering, Pune
7	Study of metallurgical factors in improving life of wire drawing carbide dies using cryo treatment	IIM-NMD-ATM 2017, International symposium on "Lightweighting for defence, aerospace and transportation	N.B.Dhokey	11-14 Nov 2017	BITS Pillani, Goa

**National Conferences Attended**

Sr. No	Title of the Conference	Name of the Faculty	Period	Venue
1	Wear in Agriculture Implements and Machinery	V.T.Thavale	8-9 June 2018	College Of Engineering, Pune
2	Wear in Agriculture Implements and Machinery	S.P.Butee	8-9 June 2018	College Of Engineering, Pune
3	Wear in Agriculture Implements and Machinery	K.R.Kamble	8-9 June 2018	College Of Engineering, Pune
4	Wear in Agriculture Implements and Machinery	M.J.Rathod	8-9 June 2018	College Of Engineering, Pune
5	Wear in Agriculture Implements and Machinery	P. P. Deshpande	8-9 June 2018	College Of Engineering, Pune
6	Wear in Agriculture Implements and Machinery	V.S.Poddar	8-9 June 2018	College Of Engineering, Pune
7	Wear in Agriculture Implements and Machinery	S.U.Dangrikar	8-9 June 2018	College Of Engineering, Pune

**Workshop Attended**

Sr. No.	Title of the Workshop	Name of the Faculty	Duration and Period	Venue
1.	Advances in Engineering Ceramics & Composites (ACC-17)	M.G.Kulthe	12th - 13th December, 2017	College of Engineering, Pune

2.	Advances in Engineering Ceramics & Composites (ACC-17)	P.G.Ranaware	12th - 13th December, 2017	College of Engineering, Pune
3.	Advances in Engineering Ceramics & Composites (ACC-17)	V.S.Poddar	12th - 13th December, 2017	College of Engineering, Pune
4.	Additive Manufacturing: 3D printing of metals	P.G.Ranaware	28 March 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
5.	Additive Manufacturing: 3D printing of metals	M.G.Kulthe	28 March 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
6.	Additive Manufacturing: 3D printing of metals	V.S.Poddar	28 March 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
7.	Additive Manufacturing: 3D printing of metals	N.R.Anand	28 March 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
8.	Additive Manufacturing: 3D printing of	S.U.Dangrikar	28 March 2018	Dept. of Metallurgy and



	metals			Materials Science, College Of Engineering, Pune
9.	Additive Manufacturing: 3D printing of metals	M.J.Rathod	28 March 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
10.	Additive Manufacturing: 3D printing of metals	K.R.Kamble	28 March 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
11	Additive Manufacturing: 3D printing of metals	V.T.Thavale	28 March 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
12	Additive Manufacturing: 3D printing of metals	S.P.Butee	28 March 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
13	Additive Manufacturing: 3D printing of metals	R.K.Goyal	28 March 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
14	Enterprenuership in Material	K.R.Kamble	9 Feb 2018	Dept. of Metallurgy and

	Engineering			Materials Science, College Of Engineering, Pune
15	Enterprenuership in Material Engineering	V.S.Poddar	9 Feb 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
16	Enterprenuership in Material Engineering	V.T.Thavale	9 Feb 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
17	Enterprenuership in Material Engineering	S.P.Butee	9 Feb 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
18	Enterprenuership in Material Engineering	R.K.Goyal	9 Feb 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
19	Japan-India Welding Human Resources Development Project	M.J.Rathod	14th to 21st February, 2018	Association for Overseas Technical Cooperation and Sustainable Partnerships' [AOTS], Govern

				ment of Japan
20	Development in heat treatment technology of wrought iron products in ancient Vidarbha region	P. P. Deshpande	10-13 Jan 2018	Trtiyam Visva Veda Vijnana Sammelanam

**❖ 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
<b>Metallurgy engineering</b>	<b>01</b>	<b>01</b>	<b>04</b>	<b>09</b>	<b>15</b>
<b>International Conferences Organized</b>					
Sr. No.	Title of the Conference	Name of the Faculty	Period	Venue	
1	EH-TACAG'17 81 <sup>st</sup> Annual session of Indian Ceramic Society and International conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses"	S. P. Butee	14-16 December 2017	College Of Engineering, Pune	
<b>National Conferences Organized</b>					
Sr. No.	Title of the Conference	Name of the Faculty	Period	Venue	
1	Wear in Agriculture Implements and Machinery	N.B.Dhokey	8-9 June 2018	College Of Engineering, Pune	

<b>Workshop Organized</b>				
<b>Sr. No.</b>	<b>Title of the Workshop</b>	<b>Name of the Faculty</b>	<b>Period</b>	<b>Venue</b>
1	Additive Manufacturing: 3D printing of metals	N.B.Dhokey 24, 7	28 March 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
2	Enterprenuership in Material Engineering	N.B.Dhokey 64	9 Feb 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
3	Metal Process Simulation	Vilas Gunjal 31	5 August 2017	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
4	Advances in Engineering Ceramics & Composites (ACC-17)	S.P.Butee 22 8	12th - 13th December, 2017	College of Engineering Pune

<b>Seminar Organized</b>				
<b>Sr. No.</b>	<b>Title of the Seminar</b>	<b>Name of the Speaker, Co-ordinator</b>	<b>Period</b>	<b>Venue</b>
1	Slag design - Steel making	S B Sarkar, N.B.Dhokey 54	20 Jan 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
2	Solidification and Segregation in Al alloys	M. U. Hosmane, V.S.Poddar 16 15000	23 Feb 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
3	Cracking in Metals	D B Goel, R.K.Goyal		Dept. of Metallurgy and Materials Science, College Of Engineering, Pune

4	The transformation of steel in the last fifty years	Sanak Mishra, N.B.Dhokey 55 1000	10 April 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
5	12 <sup>th</sup> Dr. Dara P. Antia Lecture, “Is technology alive?”	Tridibesh Mukherjee, N.B.Dhokey	7 April 2018	College of Engineering Pune
6	Development of low carbon ultra high strength steel containing nano-meter sized carbide and copper particles	M.P.Phaniraj, N.B.Dhokey	11 Jan 2018	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
7	Alternative routes of Iron making	S B Sarkar, V.T.Thavale	02 Nov 2017	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
8	Dr. APJ Kalam memorial lecture on “Evolution of Materials for the Aerospace Industry”.	Dr. Pratyush Kumar, President, Boeing India and Vice President Boeing International, M. J. Rathod	15 Oct 2017	Dept. of Metallurgy and Materials Science, College Of Engineering, Pune
9	Reviving waste in green manufacturing – Creating new solutions through Innovation and Partnership	Prof. Veena Sahajwallah, N.B.Dhokey	23 August 2017	College of Engineering Pune

## ❖ AWARDS & HONORS

### ● For Faculty

Sr. No	Name of the Faculty	Name of the Award	Description	No. of Awards
1	M.G.Kulthe	the most vigilant invigilator	Was honoured by Controller of Examination, COEP, Pune	01

### ● For Students

Sr. No	Name of the student	Name of the Award/Achievement	Description	No. of Awards
1.	Mr. Akash Mahajan	3 <sup>rd</sup> in electroceramics category in EH-TACAG'17 81 <sup>st</sup> Annual session of Indian Ceramic Society and International conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses"	Synthesis, Fabrication and Electrical Characterisation of La <sub>2</sub> Ti <sub>2</sub> O <sub>7</sub> ceramics	01
2.	Ms. Amruta Vairagade	3 <sup>rd</sup> in student session presentation in EH-TACAG'17 81 <sup>st</sup> Annual session of Indian Ceramic Society and International conference on "Expanding Horizons of Technological Applications of Ceramics and Glasses"	Synthesis and Electrical Properties of Sodium Beta Alumina Ceramics	01

## ❖ DETAILS OF STUDENTS GONE FOR HIGHER STUDIES

Name of the Student	Name of the University/ institute		Year of Passing
	Foreign	Indian	
Chaitanya Mahajan	University of Texas Arlington, IIT Chicago		2018
Chinmay S	Queen's University		2018
Mansi Gade	KU leuven, Tu Delft		2018
Ajinkya Hire	University of Florida, Tu Delft		2018
Devki Deshmukh		IIT Gandhinagar	2018
Ishan Mahabal		IIM Ahmadabad.	2018
Dhairyasheel patil		IISc, Bangalore	2018

## ❖ SPECIAL MENTION

## ❖ MEMBERSHIPS TO SOCIETIES

Sr. No	Name of the Society	Name of the faculty/s
1	Nil	

## ❖ FACULTY MEMBER

Sr. No.	Name of the Faculty	Highest Qualification	Designation	Areas of Interest
1.	Dr. N. B. Dhokey	Ph.D.	Professor & Head	Tribology, Powder metallurgy, Energy Materials, Soft Magnetic materials , Cryotreatment of materials
2..	Dr. M. J. Rathod	Ph.D.	Professor	Material joining and Laser material processing
3.	Dr. S. T. Vagge	Ph.D.	Professor	Corrosion and Surface Engg
4.	Dr. S. P. Butee	Ph.D.	Associate Professor	Electro-Ceramics
5.	N. R. Anand	M.E.	Associate Professor	Heat Treatment
6.	Dr. R. K. Goyal	Ph.D.	Associate Professor	Nanotechnology, polymer matrix nanocomposites, composites, electronic materials and materials characterization.
7.	S. U. Dangrikar	M.E.	Assistant Professor	Heat Treatment, Metal Working
8.	Dr. P. P. Deshpande	Ph.D.	Assistant Professor	Conducting polymers and corrosion control of Steels
9.	V. T. Thavale	M.E. (Metallurgy)	Assistant Professor	Powder Metallurgy
10.	M. G. Kulthe	M.E. (Metallurgy)	Assistant Professor	Polymer matrix micro and nano composites
11.	R. S. Ranade	M.E. (Metallurgy)	Assistant Professor	Foundry Technology, Extractive Metallurgy
12.	A. M. More	M. Tech.	Assistant Professor	Physical Metallurgy
13.	K. Kamble	M.Tech	Assistant Professor	Ceramic processing, Electroceramics, ionic conductors, composite materials
14.	Dr. V. Gunjal	Ph.D.	Adjunct Faculty	Metallurgical Thermodynamics, Modelling in Materials Engg, Failure Analysis in Engg Materials
15.	V. S. Poddar	M.Tech	Adjunct Faculty	Wire Tech, Forging Tech, Electronic and Magnetic Materials, Metal working
16.	Prakash Ranaware	Ph.D.	Adjunct Faculty	Heat Treatment
17.	Dr. P. R. Khangaonkar	Ph.D.	VisitingFaculty	Physical Metallurgy
18.	M. U. Hosmane	M.E.	VisitingFaculty	Forging Technology

19.	Dr. J. K. Chakravarty	Ph.D.	Steel Chair Professor	Fatigue and Fracture Study
20.	Dr. Madhu Ranjan	Ph.D.	Emeritus Professor	Forging Technology