CURRICULUM VITAE

Dr. Shalini Gautam

Assistant Professor
Department of Fuel, Minerals and
Metallurgical Engineering
IIIT (ISM)Dhanbad
Jharkhand, INDIA-826004
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Area of Interest:

Thermochemical Conversion of Solid Fuels, Coke Making, Coal, Biomass Combustion and Gasification, Hythane Production, DRI

1. Experiences:

Position	Organization	Period
Associate Professor	IIT (ISM), Dhanbad	April, 2021 – till date….
Assistant Professor	IIT (ISM), Dhanbad	February, 2010 – March, 2021
Lecturer	IIT (ISM), Dhanbad	May, 2007 – January, 2010

2. Educational Qualification:

Examination	Year of passing	Institution	CGPA	Remarks
PhD (Fuel)	2010	IIT (ISM), Dhanbad, Jharkhand	-	-
M. Tech (Fuel)	2003	IIT (ISM), Dhanbad, Jharkhand	8.2	1st division
B.Tech (Chemical)	1999	BIT Sindri, Dhanabd, Jharkhand	7.52	1st division

3. Courses Taught:

a) Fuel Technology
b) Coal Characterization and its Utilization
c) Processing of Liquid & Gaseous Fuels
d) Coal Carbonization Technologies
e) Clean Coal Technology

f) Power Plant Engineering

g) Processing of Liquid & Gaseous Fuels

h) Combustion & Energy Engineering

i) Furnaces and Refractories

j) Fuel Technology & Mineral Processing

k) Metallurgical Thermodynamics & Kinetics

4. Publications:

1. A. Anand, S. Gautam, L. Chand Ram, A characteristic-based decision tree approach for sustainable energy applications of biomass residues from two major classes, Fuel. 339 (2023) 127483. https://doi.org/10.1016/J.FUEL.2023.127483 .

2. A. Anand, A. Kachhap, S. Gautam, Synergistic effect of coal and biomass gasification and organo-inorganic elemental impact on gasification performance and product gas, Energy. 282 (2023) 128662. https://doi.org/10.1016/j.energy.2023.128662.

3. A. Anand, S. Gautam, L.C. Ram, Feedstock and pyrolysis conditions affect suitability of biochar for various sustainable energy and environmental applications, J. Anal. Appl. Pyrolysis. 170 (2023) 105881. https://doi.org/10.1016/J.JAAP.2023.105881 .

4. A. Anand, S. Gautam, K. Kundu, L.C. Ram, Bio-coke: A sustainable solution to Indian metallurgical coal crisis, J. Anal. Appl. Pyrolysis. 171 (2023) 105977. https://doi.org/10.1016/j.jaap.2023.105977 .

5. A. Mishra, S. Gautam, T. Sharma, Gasification kinetic studies of low volatile weakly caking coal, Int. J. Coal Sci. Technol. 4 (2023). https://doi.org/10.1007/s40789-023-00587-4 .

6. M. Chattopadhyay, A. Anand, S. Gautam, A comparative evaluation of co-gasification of blends of low grade and washed coals with high- rank coal in a fixed bed reactor, Int. J. Coal Prep. Util. 00 (2023) 1–18. https://doi.org/10.1080/19392699.2023.2234291 .

7. D.K. Paswan, A. Anand, B.K. Nandi, S. Gautam, Drying Characteristics and Kinetics Behavior of Indian Coal Slurries Using Natural Draft Tray Dryer, Int. J. Coal Prep. Util. (2022) https://Doi.Org/10.1080/19392699.2022.2111557 .

8. D. Das, A. Anand, S. Gautam, Effect of rice husk volatiles in iron ore reduction and its kinetic study, Energy Sources, Part A Recover. Util. Environ. Eff. 44 (2022) 6321–6333. https://doi.org/10.1080/15567036.2022.2098417 .

9. D. Das, A. Anand, S. Gautam, V.K. Rajak, Assessment of Utilization Potential of Biomass Volatiles and Biochar as a Reducing Agent for Iron Ore Pellets, J. Env. Tech. (2022) 1–26. https://doi.org/10.1080/09593330.2022.2102936 .

10. B.K. Prajapati, A. Anand, S. Gautam, P. Singh, Production of hydrogen- and methane-rich gas by stepped pyrolysis of biomass and its utilization in IC engines, Clean Technol. Environ. Policy. 1 (2022) 1–14. https://doi.org/10.1007/S10098-021-02249-Y .

11. Z. Rahimi, A. Anand, S. Gautam, An overview on thermochemical conversion and potential evaluation of biofuels derived from agricultural wastes, Energy Nexus. 7 (2022) 100125. https://doi.org/10.1016/J.NEXUS.2022.100125.

12. S. Suman, **S. Gautam**, Physicochemical Performance of Wood Chips Char and Wheat Husk Char for Utilisation as an Alternate Source of Energy, Int. J. Recent Technol. Eng. (2020) 2277–3878. https://doi.org/10.35940/ijrte.C6119.018520.

13. A. Mishra**, S. Gautam**, T. Sharma, Gasification of Jhama Coal using Statistical Design ofExperiment, Trans. Indian Inst. Met. 72 (2019) 523–531. https://doi.org/10.1007/s12666-018-1504-8.

14. A. Mishra, **S. Gautam**, T. Sharma, Effect of operating parameters on coal gasification, Int. J. Coal Sci. Technol. 5 (2018) 113–125. https://doi.org/10.1007/s40789-018-0196-3.

15. S. Suman, D.S. Panwar, **S. Gautam**, Surface morphology properties of biochars obtained from different biomass waste, Energy Sources, Part A Recover. Util. Environ. Eff. 39 (2017) 1007–1012. https://doi.org/10.1080/15567036.2017.1283553.

16. S. Suman, **S. Gautam**, Biochar Derived from Agricultural Waste Biomass Act as a Clean and Alternative Energy Source of Fossil Fuel Inputs, in: Energy Syst. Environ., InTech, 2018. https://doi.org/10.5772/intechopen.73833.

17. S. Gautam, Effect of washing and stamping on coke making of a low-grade Indian coal: correlation between various properties, Ironmaking and Steelmaking. 44 (2017) 505–512. https://doi.org/10.1080/03019233.2016.1217115.

18. S. Suman, **S. Gautam**, Pyrolysis of coconut husk biomass: Analysis of its biochar properties, Energy Sources, Part A Recover. Util. Environ. Eff. 39 (2017) 761–767. https://doi.org/10.1080/15567036.2016.1263252.

19. S. Suman, **S. Gautam**, A comparative study between time, temperature, and fixed carbon using different biochar reductants as an alternate source of energy, Energy Sources, Part A Recover. Util. Environ. Eff. 39 (2017) 1029–1035. https://doi.org/10.1080/15567036.2017.1284959.

20. S. Suman, **S. Gautam**, Pyrolysis of coconut husk biomass: Analysis of its biochar properties, Energy Sources, Part A Recover. Util. Environ. Eff. 39 (2017) 761–767. https://doi.org/10.1080/15567036.2016.1263252.

21. S. Suman, **S. Gautam**, Effect of pyrolysis time and temperature on the characterization of biochars derived from biomass, Energy Sources, Part A Recover. Util. Environ. Eff. 39 (2017) 933–940. https://doi.org/10.1080/15567036.2016.1276650.

22. S. Suman, D.S. Panwar, **S. Gautam**, Surface morphology properties of biochars obtained from different biomass waste, Energy Sources, Part A Recover. Util. Environ. Eff. 39 (2017) 1007–1012. https://doi.org/10.1080/15567036.2017.1283553.

23. **S. Gautam**, Assessment of Low-Volatile Poor Caking Indian Coal for Coke Making, Int. J. Coal Prep. Util. 37 (2017) 33–43. https://doi.org/10.1080/19392699.2015.1123697.

24. S.K. Verma, R.E. Masto, S. Gautam, D.P. Choudhury, L.C. Ram, S.K. Maiti, Investigations on PAHs and trace elements in coal and its combustion residues from a power plant, Fuel. 162 (2015) 138–147. https://doi.org/10.1016/j.fuel.2015.09.005.

25. Sanjeev Sharma, Amrit Anand, Shalini Gautam, Effect of Low-Rank and High-Rank Coal Blend Characteristics on the Gasification Performance in Fixed Bed Reactor. ACS Omega (2024), https://doi.org/10.1021/acsomega.4c03475.

26. Amrit Anand, Dipika Das, Shalini Gautam, Production of Hythane by Stepped Pyrolysis of Biomass. *Progress in Petrochemical Science* (2023). http://dx.doi.org/10.31031/PPS.2023.05.000606.

27. Dipika Das, Amrit Anand, Shalini Gautam, A Review of Biomass Utilization as a Reducing Agent in Iron Ore Reduction. *Progress in Petrochemical Science* (2023) http://dx.doi.org/10.31031/PPS.2023.05.000609.

28. A Mishra, S. Gautam and T Sharma T., 2014, Effect of Char Structure on Coal Gasification, Journal of Basic and Applied Engineering Research, 1(1):1-3. 4.

29. A. Mishra, S. Gautam and T. Sharma, 2015, Study on coal gasification kinetics, Journal of Material Science and Mechanical Engineering, 2(4):326-328.

30. A. Mishra, S. Gautam and T. Sharma, 2016, Coal Gasification: An Advance Power Generation Technology, Advanced Research in Electrical and Electronic Engineering, 3(1):1-3.

31. A. Mishra, S. Gautam and T. Sharma, 2017, Product Gas Analysis and Effect of Partial Pressure on the Gasification Behavior of Jhama Coal, International Journal of Advance Research and Innovative Ideas in Education, 3(3): 3755-3759

5. International Conferences:

1. Amrit Anand**, Shalini Gautam,** Characterization and Thermo- gravimetric Analysis of Biomass for Its Potential Utilisation as an Alternate Energy Resources, ICRAE-2018, 4-6 December, ASTU, Assam, 2018
2. Amrit Anand, **Shalini Gautam** Biomass potential and its Utilization pattern inIndia ICRAE-2018,4-6 December, ASTU, Assam, 2018
3. Amrit Anand, **Shalini Gautam**Characterization of Biomass for its potential utilization as alternate source of energy, Mineral Processing Technology 2018, 10-12 October,IIT(ISM) 2018
4. Dipika Das, Anju Kachhap, **Shalini Gautam,** Soham Kumar Biswal &Shounak Banerjee, Effect of organic binder on fired iron ore pellet National Metallurgists'Day (NMD) and Annual Technical Meeting (ATM), Goa Nov 11-14, 2017
5. Anju Kachhap, **Shalini Gautam** Comparative study of Reduction Kinetics of Iron Ore Pellets using non-coking coal and wooden dustchar National Metallurgists' Day (NMD) and the 72ndAnnual Technical Meeting (ATM), Goa, Nov 11-14, 2017

6. Swapan Suman, Dipika Das, Shashi, Noor Beck & **Shalini Gautam** Characterization andUtilization of Solid Agricultural Wastes as an Alternative Energy Source international Seminar on Environment and Development in Eastern India 17-18 December, 2016
7. Mishra A., **Shalini Gautam**, and Sharma T., 2016, Coal Gasification: An advance power generation technology, Innovative research in mechanical engineering, automotive and aerospace technology (MEAT-2015), JNU, New Delhi.
8. Mishra A., **Shalini Gautam**and Sharma T., 2015, Study on Coal Gasification Kinetics, International Conference on "Innovative Trends in Mechanical, Material, Manufacturing, Automobile and Aeronautical Engineering" (ITMAAE-2015), Bapatla, Guntur(Dt.) Andhra Pradesh.
9. B S Ken, **Shalini Gautam** Utilization of Agricultural wastes for MetallurgicalpurposesMineral Processing Technology 12-14March, 2015
10. Mishra A., **Shalini Gautam**and Sharma T., 2014, Effect of Char Structure on Coal Gasification, INTERNATIONAL CONFERENCE On "Innovative Trends in Mechanical, Material, Manufacturing, Automobile, Aeronautical Engineering and Applied Physics" (ITMAEAP2014), JNU, New Delhi.
11. Mishra A., **Shalini Gautam**and Sharma T., 2014, Gasification of Non-Coking Coals, International Conference of Advance Research and Innovation (ICARI-2014), New Delhi.
12. **Shalini Gautam**, Sourav Gupta Comparative study of Reduction Kinetics of Ironore pellets using non-coking coal and low volatile caking coal Mineral Processing Technology 2014
13. **Shalini Gautam**, Sourav Gupta, Prabal Kumar Agarwal, Study of Reduction Kinetics of Iron Ore pellets by using Low Volatile Caking Coal, Mineral Processing Technology 2014
14. S Soren, **Shalini Gautam** Effect of Thermo mechanical Controlled Processing Parameters on Microstructures and Mechanical Properties of Micro alloyedSteelInternational Conference on Structuraland Physical Properties of Solids (SPPS-2013)18-20 Nov2013, ISM, Dhanbad, PP-09
15. Deepak Singh Panwar, Suvradri Bar, **Shalini Gautam** Influence of binder concentrationon the characteristics of coke and its microstrengthNational seminar on Koyla Upayog: Drishti 2025May (4-5), 2012, CIMFR(DC)
16. Amit Pandey, **Shalini Gautam** Potential use of Low Volatile Medium Coking Coal for Coke Making
17. National Conference cum Workshop on Geological & Technological Facets of CBM, Shale Gas, Energy Resources and CO_2 Sequestration (CSECS2010), 200-206, ISM Dhanbad
18. **Shalini Gautam**, V K Saxena, T Sharma, Influence of Moisture and Stamping on Cokestrength,Mineral Processing Technology (MPT-2005)January 6-8, 325-332. ISM Dhanbad

6. Book Chapters:

i. Anand A, **Gautam S**; Characterization and Thermogravimetric analysis of Biomass for its potential Utilisation as an alternate energy resources; 93-108; *Emerging Renewable Energy Technology*; Plaban, Biswa and Dhiraj Maliyata; India; 2018. **ISBN: 978-81-935731-5-0**

ii. **Gautam S**, Das D, Krishna N; Biomass and their Utilisation as Briquettes; 93-108; *Emerging Renewable Energy Technology*; Plaban, Biswa and Dhiraj; Maliyata; India; 2018. **ISBN: 978-81-935731-5-0**

iii. Swapan Suman, **Shalini Gautam**; Biochar Derived from Agricultural Waste Biomass Act as a Clean and Alternative Energy Source of Fossil Fuel Inputs; Energy Systems and Environment, September 2018 Intech Open; Open Access Books Ch-12 , Page-(207-220). **DOI: 10.5772/intechopen.73833**

7. Patents

1. Intelligent Method and Process to Extraction of Silica from Rice Hulls (Application No: 202021055416) (Grant in process)

2. Shalini Gautam, Amrit Anand, A novel method to produce Bio-coke (submitted to IIT ISM)

3. Shalini Gautam, Amrit Anand, Development of thermochemical reactor (TCR) to analyze the reactivity, intrinsic kinetics and process thereof, and optimization of Hythane production from biomass and RDF. (In process)

4. Shalini Gautam, Amrit Anand, Dipika Das, Development of two stages reduction furnace for iron ore reduction through volatile matter and hydrogen rich syngas obtained from biomass. (In Process)

8. PhD Supervision:

S. No.	Title	Student Name	Guide/Co-Guide	Status/Year
1.	"Studies on Combustion and Carbonization Characteristics of Agricultural Wastes for Thermal and Metallurgical Purposes".	Dr. Swapan Suman	Guide: Shalini Gautam	Completed (2018)

2.	"Gasification kinetic studies on Low Volatile Weakly Caking coal and Jhama coal for Syngas production and its utilization for reduction of Iron Ore pellets".	Dr. Akanksha Mishra	Guide: Shalini Gautam	Completed (2019)
3.	"Characterization and Processing of different Biomass for their utilization in Iron & Steel Industries".	Dr. Deepika Das	Guide: Shalini Gautam	Completed (2023)
4.	"Studies on Coal Quality and Gasification Pattern in commercial Fixed Bed Gasification plant"	Dr. Milan Chattopadhyay	Guide: Shalini Gautam	Completed (2023)
5.	**"**Thermochemical conversion of biomass and their utilization in Thermal and Metallurgical applications".	Dr. Amrit Anand	Guide: Shalini Gautam	Completed (2024)
6	"Studies on drying characteristics of Indian coal slurry and lignite coal using natural and forced draft tray dryer"	Dr. Deepak Kumar Paswan	Co-Guide: Shalini Gautam	Completed (2023)
6.	"Studies on gasification performance of high ash Indian coal and imported coal blends in Moving Bed Gasifier"	Mr. Sanjeev Sharma	Guide: Shalini Gautam	Thesis Submitted (2016)
7.	"Mineralogical Characterization of some of the Indian Biomasses during their various thermo chemical processes".	Ms. Anju Kachhap	Guide: Shalini Gautam	Ongoing (2017)
8.	"Characterization and Potential utilization of Indian Biomasses for the production of Hythane (a mixture of hydrogen and methane)".	Mr. Brijesh Kumar Prajapati	Guide: Shalini Gautam	Ongoing (2017)
9.	"Reduction of Iron ore pellets with Hythane and Hydrogen".	Mr. Akash Bharadwaj	Guide: Shalini Gautam	Ongoing (2024)
10.	"Life Cycle Assessment and techno-economic analysis of Hydrogen production and utilisation for metallurgical prospects".	Mr. Rajesh Kumar Barnwal	Guide: Shalini Gautam	Ongoing (2024)

9. M.Tech Dissertation:

SNo	Title	Student Name	Year
1.	Potential utilization of low volatile medium coking coal for reduction and carbonization process.	Jitendra Singh (2009MT0048)	2011

2.	Potential use of Low Volatile Medium Coking Coal for Coke Making	Amit Pandey (20009MT0054)	2011
3.	Prospect of coal mine methane recovery in Ichhapur coal block of Raniganj coal field.	Suvradri Bar (2010MT0161)	2012
4.	Prospects of coal mine methane recovery in Kulti coal block of Raniganjcoalfield.	Deepak Singh Panwar (2010MT0152)	2012
5.	Study of oxy-Fuel combustion and normal air combustion of pulverized coal in drop tube furnace.	Minhajul Islam (2011MT0154)	2013
6.	Study of oxy-fuel combustion of pulverized coal and its comparison with conventional air combustion.	Arun kumar (2011MT0157)	2013
7.	Characterization and comparative settling studies of thermal and coking coals.	Shamshad Raza (2012MT0121)	2014
8.	Utilization of agriculture wastes for metallurgical purpose.	Bhupendra Singh Ken (2012MT0203)	2014
9.	Effect of organic binder on fired iron ore pellet formation and its parameters	Sobhan Kumar Biswal (2012MT0117)	2014
10.	Co-gasification performance study oh high ash Indian coal and different biomass in fluidized bed gasifier	Shishir Tiwari (2013MT0236)	2015
11.	Reduction of iron ore using biomass char	Deepak Kumar Paswan (14MT000282)	2016
12.	Characterization of Jhama coal	Mahmood Alam (14MT000251)	2016
13.	Reduction of iron ore pellets by using Jhama coal (natural coke)	Gauri Shankar Vastrakar (14MT000202)	2016
14.	Optimization of flotation of oxidized coking coal fines using response surface methodology and central composite rotatable design	Nanda Kishore Patra (14MT000529)	2016
15.	Characterization and compositional analysis of biomass waste for itsUtilisation	Amrit Anand (15MT000682)	2017
16.	Reduction of iron ore pellets and fines with biochar	Ashish Pratap Ranjan (15MT000243)	2017
17.	Low pressure biomass briquetting and its characteristics	Aggarapu Nithin Krishna (2016MT1022)	2018
18.	Studies on the impact of excess sour vapor/tail gas on the quality of coke-oven gas	Ritesh Kumar chanchal (16MT001387)	2018
19.	Optimization of specific heat consumption of coke oven battery	Anukolu Viswas Reddy (16MT001002)	2018
20.	Studies on characterization and synthesis of bio-coke from agricultural wastes	Kaushik Kundu (17MT0001767)	2019
21.	Study of Briquettes formed using Coal and Biomass	Kumar Rishav (17MT001723)	2019
22.	Characterization and processing of biomass for biochar production	Yalda Ziay Noori (18IM0005)	2020

23.	Comprehensive study on the utilization of waste lubricating oil as an additive in coke synthesis	Madhurjya Borthakur (18MT0462)	2020
24.	Characterization and assessment of a hybrid fuel derived from bio-char and refuse-derived fuel (RDF)	Nidhi Kushwaha (2019M.Tech)	2021
25.	Thermochemical conversion and potential evaluation of bio-fuel derived from agricultural wastes	Zohra Rahimi (2019M.Tech)	2021
26	Gasification of refuse derived fuel (RDF) for syngas Production and its optimisation as hydrogen rich	Madhumonti Bhattacharya (20MT0199)	2022
27	Upgrading of RDF through Torrefaction as well as Carbonization and Evaluation of RDF Char	Smita Mondal (20MT0400)	2022
28	Utilisation of RDF in coke-making	Akash Patwa (20MT0057)	2023

10. <u>Undergraduate:</u>

- Guided 40 B. Tech students

11. <u>Awards:</u>

I. Gandhian Young Technological Innovation Award

Innovator: Sourav Gupta; Guide Name: Prof. Shalini Gautam
College: IIT ISM Dhanbad, Submission Year: 2014

2. Inder Mohan Thapar Award-2023 for best publication
Student: Amrit Anand; Guide Name: Prof. Shalini Gautam
College: IIT ISM Dhanbad, Submission Year: 202

12. <u>Research Projects:</u>

Sl. No.	Title of project	Amount (Rs in lakhs)	Funding Agency	Role	Status
1	"Characterization, Beneficiation and coke making of Low Volatile Medium Coking coals".	9.56	UGC, New Delhi	**PI**	Completed
2	137/TEQIP/500507/17-18 Designing of two zone High-Temperature Muffle Furnace	2.5	IIT ISM	**PI**	Completed
3	"Characterization and Assessment of utilization potential of coal for Power Plants". PTPP/2019-2020/704/FMME	2	PTPP, Jhansi	**PI**	Completed
4	"Assessment of utilization	5.67	OTPP, Obra	**PI**	Completed

	potential of coal for Power Plants". OTPP/2021-2023/705/778/919/FMME				
5	Sampling and analysis of 58000 MT of reject Dahibari Coal Washery BCCL/2022-2023/953/FMME	5.47	BCCL	**Co-PI**	Completed
6	Quality assessment of 1.70 Lakh Tons of Rejects of Patherdih NLW Washery Washery BCCL/2021-2022/821/FMME	13.44	BCCL	**PI**	Ongoing
7.	Development and Standardization of Biochar and By-products for Application in the Indian Iron & Steel Industry	611.69	Sentra.World Technologies Private Limited, Bangalore	**PI**	Ongoing

13. Consultancy Projects

S no	Consultancy No	Title	Organisation Name	Status
1	EDP/5050/2019-2020	Advanced Course on Coal and Mineral(s) Beneficiation for the Executives of the Tata Steel.	TATA Steel	Completed
2	CONS/3981/2018-2019	Determination of GCV and proximate analysis of Coal sample of PTPS, Panki, Kanpur	UP Rajya Vidyut Utpadan Nigam Ltd	Completed
3	CONS/3974/2018-2019	Analysis of Coal Samples for Annual declaration of Coal Grade for Chasnala ,Jitpur and Tasra Colliery	SAIL	Completed
4	CONS/3973/2018-2019	Third party Sampling & Analysis of Coal dispatched from CCL washeries/ROM to SAIL Plants	SAIL	Completed
5	CONS/3964/2018-2019	Sampling and analysis of Sudamdih coal Washery SLURRY	BCCL	Completed
6	CONS/3948/2017-2018	SamplingProximateAnalysisandGCVdeterminationof2,90,000/-metrictonsofRejectCoalofBojudihCoalWasheryBCCL, Dhanbad.	BCCL	Completed
7	CONS/3926/2017-2018	Sampling and Analysis of Sudamdih Coal Washery Slurry.	BCCL	Completed
8	CONS/3840/2018-2019	Sampling and Grading of 7.76 Lakh Ton of Coal Dumps from Rajrappa Washery CCL (Part - B)	CCL	Completed

9	CONS/3839/ 2018-2019	Sampling and Grading of 1.46 lakh Ton of Coal Dumps from Swang Washery CCL (Part-A)	CCL	Completed
10	CONS/3813/ 2017-2018	Sampling and Grading of 0.8 million Ton of Coal Dumps from CCL, Mining Area (Part - b)	CCL, Ranchi	Completed
11	CONS/3765/ 2017-2018	Sampling proximate Analysis and GCV determination of 75,000/- metric tons of Raject Coal of Bojudih Coal Washerym BCCL, Dhanbad	BCCL	Completed
12	CONS/3753/ 2017-2018	Technical Studies on Washability of Coal Samples from 9 different Mines of CCL	CCL Ranchi	Completed
13	CONS/3711/ 2017-2018	Proximate & GCV Analysis of Samples Received from CCO-Bilaspur (Part-B)	SECL, Bilaspur	Completed
14	CONS/3698/ 2017-2018	Sampling and Grading of 0.8 million Ton of Coal Dumps from CCL Mining Areas	CCL	Completed
15	CONS/3631/ 2017-2018	Sampling and Analysis of Madhuban Coal Washery Slurry.	SP Colliery of Eastern Jharia Area, BCCL	Completed
16	CONS/3629/ 2017-2018	Sampling and Analysis of Madhuban Coal Washery Slurry Part – B	Dubeswari Colliery, ECL	Completed
17	CONS/3587/ 2017-2018	Sampling and Analysis of Coal Samples dispatched from BCCL	BCCL	Completed
18	CONS/3570/ 2017-2018	Technical Studies on Washability of Coal Samples from 8 different Mines of CCL	CCL	Completed
19	CONS/3569/ 2017-2018	Sampling and Grading of SECL Coal Samples (Part B)	Bhagaband Colliery, BCCL	Completed
20	EDP/3566/20 17-2018	Coal Preparation Principles and Plant Practices.	CIL	Completed
21	CONS/3498/ 2017-2018	Analysis of Coal Sample from Anpara Thermal Power Station.	Anpara B Thermal Power Station, Sonebhadra	Completed
22	CONS/3482/ 2016-2017	Sampling and Analysis of Coal samples dispatched from CCL.	CCL	Completed
23	CONS/3461/ 2016-2017	Analysis of Coal Sample from Obara Thermal Power Station	Obra Thermal Power Project Obra.	Completed
24	CONS/3460/ 2016-2017	Third Party Sampling of Coal Supplied from CCL Washeries and Mines to SAIL Steel Plants	SAIL	Completed
25	CONS/3447/ 2016-2017	Sampling and Analysis of Coal samples dispatched from BCCL, CCL & SECL.	SECL	Completed
26	CONS/3357/ 2016-2017	Testing of coal Samples.	AKA Logistics Pvt. Ltd. Kolkata - 17	Completed
27	EDP/3346/20 16-2017	Coal Beneficiation principles and plant practices.	CIL, Kolkata	Completed

28	CONS/3265/ 2016-2017	Proximate Analysis of Coal Sample received from Rajganj Thana, Dhanbad	ASI Rajganj	Completed
29	CONS/3179/ 2016-2017	Analysis of Coal samples from Obara Thermal Power Station	Obara Thermal Power Project Obara.	Completed
30	CONS/3119/ 2015-2016	Determination of GCV and proximate analysis of Coal Sample of ATPS, Sonebhadra	A B Thermal Power Station	Completed
31	CONS/3072/ 2015-2016	DeterminationofQuality/GradeofVariouscoalseamsandtheirPhysicoMechanicalPropertiesTensile&Compressive Strength) of various coal seams of different Mines of WCL Part-A	WCL	Completed
32	CONS/3064/ 2015-2016	Determination of GCV and Proximate Analysis of Coal Sample of ATPS Sonebhadra	ATPS Sonebhadra	Completed
33	CONS/3061/ 2015-2016	Determination of Coking and Swelling Index of Coal Sample of NTPC-Tanda-Region.	NTPC	Completed
34	CONS/2902/ 2015-2016	Determination of Specific gravity of Coal Seam I, II and III of Amalgamated NT-ST Colliery Patch 'E'.	WCL, Nagpur	Completed
35	CONS/2897/ 2015-2016	Analysis of Coal Samples Provided by BGR Mining	BGR Mining, Hyderabad.	Completed
36	CONS/2800/ 2014-2015	Determination of Specific gravity of Coal Seam I, II and III of Amalgamated NTST Colliery	Mines Rescue Station Dhanbad	Completed
37	CONS/2645/ 2014-2015	Testing of Coal Samples	Chinakuri Mine No. II, ECL	Completed
38	CONS/2644/ 2014-2015	Testing of Coal Samples	Godhar Colliery, BCCL	Completed

14. Academic Responsibilities:

S. No.	Responsibilities
1	Academic Council member
2	Research Council member
3	Committee member for conducting exams as well as ember in the recruitment of Assistant Registrars at ISM.
4	Faculty of Chemical Engineering Department as additional charge
5	Warden of Girls Hostel.
6	Tabulator for the Monsoon and winter semester exam of B. Tech and M.Tech courses.
7	Committee member for conducting interview for the recruitment of

	Research Scholars and Project Fellows
8	In-charge of Summer Training and internship of B. Tech and Dual Degree students
9	Member of Technical Advisory Committee
10	Member of Departmental Research Committee
11	Convener of Departmental Advisory Committee
12	Member of Department of Faculty Scrutiny Committee.
13	DPGC & DUGC member
14	Member of DSC committees of sister depts..
15	Faculty In-charge of Research Fellows
16	Consultant In-charge of many Consultancy works
17	Expert and Question Setter for recruitments in Firms like TCS (Tata Consultancy Services)
18	Board member in many interviews for the selection of Assistant Professors, Project Staffs, Technical Staffs etc.