Sl/No	Topic	Roll No.	Faculty
1	Application of artificial intelligence and machine learning in Chemical Processes	18BCH007	
2	Critical review on Cellulosic biomass derived renewable energy product and processes	18BCH014	
3	Battery recycling : Role of Chemical Engineering	18BCH016	
4	Life cycle assessment of chemical processes (one or two case studies has to be prepared and presented)	18BCH001	**Dr. Pravin Kodgire**
5	Feasibility study of magnetic nanoadsorbent for the Chromium (VI) removal	18BCH068	
6	Fabrication of Mxene based nanocomposites for efficient CO2 reduction	18BCH070	
7	Advanced Ionic Liquids for Heavy oil enhanced oil recovery	18BCH055	
8	Progress and Prospects of Hydrogen Production: Opportunities and Challenges	18BCH050	**Dr. Swapnil Dharaskar**
9	Photoelectrochemical Hydrogen generation through water splitting: Indian Advancement in the last decade	18BCH079D	
10	Photocatalytic Dye degradation: Indian Advancement in the last decade	18BCH008	
11	E-Waste Management:Indian Advancement in the last decade	18BCH033	
12	Photoelectrochemical Oxygen generation through water splitting: Indian Advancement in the last decade	18BCH064	**Dr. Ravi Tajasvi**
13	Review on novel adsorbents and its related mechanism for O2 separation	18BCH003	
14	Status of India in Renewable energy production	18BCH013	
15	Review on plastic recycling in India	18BCH065	
16	Review on Electronic waste recycling in India	18BCH039	**Dr. Surendra Sasikumar**
17	The role of susceptors in microwave assisted pyrolysis of biomass and plastics	18BCH071	
18	The effect of feedstock composition on product formation in the pyrolysis of agro-residues	18BCH046	
19	Advanced upgradation technologies for e-waste valorization	18BCH027	
20	The role of thermochemical platforms for the production of renewable chemicals.	18BCH017	**Dr. DadiSuriappa Rao**
21	Removal of pharmaceutical contaminants through membrane bioreactor	18BCH038	
22	Oxidation and advanced oxidation processes in water treatment	18BCH051	
23	New Trends in Removal of Heavy Metals from Industrial Wastewater	18BCH011	
24	Membrane-based Hybrid Processes for Wastewater Treatment	18BCH056	**Dr. Bharti Saini**
25	Carbon sequestration technologies - a review	18BCH044	
26	Radioactive waste management - a review	18BCH012	
27	High performance polymers - a review	18BCH035	
28	Heavy metal remediation from water sources - a critical review	18BCH004	**Dr. Abhishek Gupta**
29	Employing photovoltaics to solve energy crisis in India	18BCH057	
30	Accelerated materials development using data science	18BCH042	
31	Perovskite solar cells, the future energy source?	18BCH067	

32	Smart materials and their applications	18BCH048	
33	Batteries for Electric Vehicles	18BCH029	**Dr. Fiyanshu Kaka**
34	Flow batteries as an energy storage solution	18BCH009	
35	Energy Storage System: Opportunities and Challenges in India	18BCH069	
36	Battery thermal management techniques for EV's	18BCH063	
37	Phase Change Materials for building energy conservation	18BCH041	**Dr. Rajat Saxena**
38	A theoretical and numerical study of hydrodynamic cavitation in pressure-based flowmeters.	18BCH002	
39	A study on adsorption of poly(ethylene oxide) at the air/water interface.	18BCH062	
40	Heavy metal (As) removal from aqueous solution by adsorption on iron-oxide coated bentonite and laterite.	18BCH052	
41	Diauxic growth of microorganisms.	18BCH031	**Dr. Subhankar Roy**
42	Hydro-gels for drug delivery	18BCH020	
43	Thermo-responsive membranes	18BCH032	
44	Conducting polymer	18BCH026	
45	Hybrid membrane processes for water treatment	18BCH045	**Dr. Manish Sinha**
46	IoT for Chemical Process Industries – Review	18BCH036	
47	CO2 Utilization Routes to Value Added Products – Review	18BCH019	
48	Nanomaterial Modified Bitumen – Review	18BCH018	
49	Solar Assisted Water Disinfection – Review	18BCH054	**Dr. Ashish Unnarkat**
50	Possible Application of Coal Fly-Ash in Waste water Treatment	18BCH059	
51	Advances in the Functionalized nano-cellulose composite for water treatment applications	18BCH077D	
52	Modeling of CO2 solubility in aqueous blended amines using Artificial neural network model	18BCH075D	
53	Case study based comparative analysis of Different CO2 capture technologies	18BCH005	**Dr. Anirban Dey**
54	Techno-economical analysis of biodiesel production using jatropha	18BCH022	
55	Techno-economical analysis of CO2 capture using ionic liquids	18BCH028	
56	Techno-economical analysis of CO2 capture using amines	18BCH030	
57	Techno-economical analysis of geothermal systems	18BCH023	**Dr. Sweta Balchandani**
58	Photonic bandgap crystals: properties, preparation methods, and challenges to prepare total bandgap in three-dimensions.	18BCH015	
59	Hydrogel: preparation methods, constitutive relations and swelling mechanism.	18BCH034	
60	Stability of foams and Pickering Emulsions	18BCH058	
61	Study of drag force on colloidal particles in a thin film.	18BCH053	**Dr. Abhishek Yadav**
62	Technology pathway for the production of Green hydrogen	18BCH037	
63	Process Intensification Technology in CO2 Capture Process	18BCH040	
64	Process simulation for the production of Methanol from syngas	18BCH047	
65	A review of production of Blue hydrogen	18BCH043	**Dr. S.K.Dash**

66	Monitoring methodology of air borne pollutant	18BCH072D	
67	Importance and application of linearization methods in chemical engineering	18BCH006	
68	Waste management of paper	18BCH025	
69	Kinetics and thermodynamics of gas hydrates	18BCH060	
70	Nanofluid in Thermal System	18BCH021	**Dr. Md. Aurangzeb**
71	Groundwater Quality Assesment	18BCH076D	
72	Machine Learning Algorithms for Groundwater Quality Assesment and Monitoring.	18BCH074D	
73	Geosolar Hybrid Organic Rankine Cycle.	18BCH066	
74	AI and ML Application in Carbon Capture.	18BCH049	**Dr. Manan Shah**