Chemical Department
Projects

Academic Year	Name of the Project/ Endowments, Chairs	Name of Principal Investigator	Abstract	Funds provided	Thrust Area	Publication
2012-13	Design and study of photo bio reactor	Dr. S. K. Deshmukh	Design and study of tubular photo bioreactor are discussed for outdoor culture of micro algae.	6000/-	Design and Development	-
2013-14	A Study On Alcoholic Fermentation.	Dr. S. Amaley	All the useful natural components of amala with therapeutic value can be easily extracted in water.	7500/-	Fermentation Technology	-
2013-14	Process Optimization Of Extraction Of Betulinic Acid From Vitex Nirgundi Leaves.	Dr. S. K. Deshmukh	Betulinic acid is pentacyclic triterpenoid having important medicinal application.	6000/-	Process Design, Optimization	-
2013-14	Production Of Adipic Acid From Cyclohexene And H_2O_2	Prof. A. P. Pardey	Synthesis of adipic acid and Investigation of effects of acidic legands on catalytic oxidation.	6750/-	Process Intensification	-
2013-14	To Evaluate The Behavior Of Cstr By Kinetics Of Saponification Reaction And Rtd Of Fluid In Reactor.	Dr. S. K. Deshmukh	This project is carried out to understand the behavior of CSTR by kinetics of saponification reaction between ethyl acetate and sodium hydro,	6000/-	Reaction Engineering	-
2013-14	Enhancement Of Fertilizer Activity On Crop Wheat And Soyabean Sap	Prof. P. R. Tayade	the proper application of chemical fertilizer for wheat crop.	6750/-	Process Intensification	-
2013-14	Removal Of Heavy Metal By Bio-Sorption Using Fresh Water Algae.	Prof. P. G. Bansod	The presence of heavy metal can be minimized by bio-sorption of water algae.	5250/-	Mass transfer, Separation Technology	-
2014-15	Preparation characterization	Prof. S. H. Amley	Involves the production of activated carbon nano particles	5250/-	Separation Technolog	-

	and application of nano particles from wheat husk		from wheat husk and its characterization.		y	
2014-15	Comparative Study of Properties of Biodiesel Manufactured From different Vegetable Oils	Prof. A. P. Pardey	Comparison of properties of biodiesel manufactured from various vegetable oil	2250/-	Bio Technology	-
2014-15	Extraction of Furfural from rice hulls	Prof. R. J. Memon	Extraction of furfural from rice hulls has been done in this work and various properties has been examined	750/-	Extraction	-
2014-15	Extraction of Fuel Oil from Tires	Prof. P. R. Chavan	Extraction of fuel oil from tires has been done in this work and various properties has been examined	2250/-	Extraction	-
2014-15	Separation of hydrogen by Dark Fermentation	Prof. P. R. Tayade	Hydrogen has been separated using dark fermentation process	3000/-	Separation Technology	-
2014-15	Performance Optimization of Synthesis Fuel Oil From Waste Plastic	Prof. P. G. Bansod	Performance optimization of synthesis fuel oil has been done using waste plastic	2250/-	Recycling Process	-
2014-15	Design of bubble Column Reactor for Treatment of Various Wastewater	Prof. Swapnil Dharskar	Bubble column reactor has been designed for waste water treatment process	3000/-	Mass Transfer	-
2014-15	Extraction of Aluin from Alovera by using Soxhelt Process	Prof. Nilesh Dumore	Extraction process of aluminum using soxhelt process has been studied in this work	2250/-	Extraction	-
2014-15	Design of Distillation Column and separation of ethanol and water	Prof. N. B. Chavan	Distillation is a process that seperates the components in to an overhead product. The min intention is to design and study the distillation process	1500/-	Seperation technology	-
2014-15	Adsorption Studies	Prof. Vaishali Ghoderao	Various adsorption processes has been performed and static and dynamic study was performed	1500/-	Mass Transfer	-
2014-15	Performance Evaluation of Straight Tube &	Prof. S. H. Amley	Various parameter viz. flow rate, friction factor etc. has been evaluated for straight tube and	6750/-	Reaction Engineering	-

	Coiled Tube PFR		coiled tube PFR			
2014-15	1. Recovery of by-products from industrial waste water using Membrane Bio-reactor 2. Recovery of industrial by-products by using Nano-filtration	Prof. A. P. Pardey	Membrane bioreactor was used for recovery of by products from industrial effluents	7500	Nano Technology	-
2014-15	1. Enhancement of H.T. Coefficient using Ionic liquids in Heat Exchanger 2. Development of Herbal Mosquito Repellent 3. Removal of Azdiritchtin from Neem Oil Using Membrane	Prof. P. R. Tayade	Heat transfer coefficient rate has been studied for ionic liquids in heat exchanger	9750/-	Heat Transfer	-
2014-15	Production of Tymol fromTrachyspermum	Prof. Nilesh Dumore	Production of tymol from trachyspermum was studied using catalytic process	3750/-	Bio Technology	-
2014-15	Manufacture of Manuare from Muncipal Waste	Prof. N. B. Chavan	Preparation of manure from municipal solid waste has been studied using fermentation	5250/-	Recycling Process	-
2015-16	Dehydration of ethanol by using pervaporation with PES-PVA composite membrane	Prof. S. H. Amley	Pervaporation process for dehydration of ethanol has been studied	6000/-	Mass Transfer	-
2015-16	1. CO2 capture and management from stationary sources using different solvents	Prof. A. P. Pardey	CO2 sequestration from stationary sources using different solvents has been studied	5250/-	CO2 Sequestration	-
2015-16	Removal of CO and CO_2 from vehicle Exhaust	Prof. P. R. Tayade	Catalytic conversion of CO to CO_2 for two wheelers has been studied	6000/-	Air Pollution Control	-

2015-16	Advancement in chemical cleaning of fouling membranes	Prof P. G. Bansod	membrane fouling and cleaning process has been studied using chemicals	4500/-	Mass Transfer	-
2015-16	Design of microbial Fuel Cell	Prof. R. J. Memon	Desiging of microbial fuel cell has been studied for production of H_2 as an alternate energy	4500/-	Bio Technology	-
2015-16	Production of Silica Gel from Rice Husk	Prof. P. R. Chavan	Production of silica gel from rice husk has been studied	5250/-	Recycling Technology	-
2015-16	Making of Soap from Aloevera	Prof. Nilesh Dumore	Esterification process for soap manufacturing from aloevera has been studied	6750/-	CRE, Mass Transfer	-
2015-16	Study of Multiple Effect Evaporators	Prof. N. B. Chavan	Designing and performance of multiple effect evaporator has been studied	6000/-	Mass Transfer	-
2015-16	Adsorption of Textile dyes and Heavy Metals on various charcoal Adsorbent in packed bed column	Prof. Vaishali Ghoderao	Adsorption of textile dyes using activated carbon has been studied and designing of a packes bed column has been done	5250/-	Mass Transfer	-
2016-17	To study conversion of plastic waste into fuel on lab scale.	Prof. S. H. Amley	The non bio degradable Plastic waste was used for the generation of fuel.	3000/-	Fermentation,	-
2016-17	Performance Evaluation of Coil Tube PFR	Prof. S. H. Amley	Various parameter viz. flow rate, friction factor etc. has been evaluated for straight tube and coiled tube PFR	3000/-	CRE	-
2016-17	To study preparation and characterization of Activated Carbon Nano-particles from wheat husk and carbon nano tubes	Prof. S. H. Amley	The operational parameters including the activation agents, chemical impregnation with weight ratio of calcined wheat husk to KOH (1:1, 1:2, 1:4) and the second activation process were investigated	6000/-	Mass Transfer	-
2016-17	Synthesis of activated carbon from	Prof. A. P. Pardey	The proposed work involves the preparation of adsorbent from arenthermum leaves using	6000/-	Mass Transfer	-

	arenthermum leaves using carbonization induced KOH activation for the removal of fluoride from drinking water		carbonization process performance of adsorbent for the adsorption of fluoride from drinking water and fitting the suitable adsorption isotherm.			
2016-17	Development of Eco-friendly exhaust silencer	Dr. P. R. Tayade	Catalytic conversion of CO to CO_2 for two wheelers has been studied	6000/-	Air Pollution control	-
2016-17	Development in Grain Dryer	Dr. P. R. Tayade	To devop the design of grain dryer on the basis of their performance and its effiency by comparing it with available grain dryer.	6000	Design and Development	-
2016-17	Modeling and Simulation of Shell and Tube Heat Exchanger	Prof. Nilesh Dumore	It involves the design and simulation of shell and tube heat exchanger using Aspen Softwere.	6000/-	Modelling, Design and Development	-
2016-17	Production of Glycerin from Vegetable oil	Prof. Nilesh Dumore	Production of glycerin from bio material using extraction process has been studied	6000/-	Bio Technology	-
2016-17	Microbial Fuel Cell-A way to generate clean electricity from waste water	Prof. Kalyani Modghare	Optimization of process parameters has been carried for Microbial Fuel Cell	6000/-	Energy and Environment	-