DR. SUDARSAN NEOGI, PROFESSOR

Chemical Engineering Department, Indian Institute of Technology Kharagpur
Associate Faculty, Petroleum Engineering Center, IIT Kharagpur
Associate Faculty, Environmental Science & Engineering, IIT Kharagpur

General Information

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Present Position

Designation	PROFESSOR
Organization	INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR
Pay Scale	HAG SCALE

Experience Details: Academic

No.	Post held	Organization	Nature of duties	Experience
1	Professor, HAG Scale	**IIT Kharagpur**	Teaching, Research and Service	2018-present
2	Professor		Teaching, Research and Service	2010-2018
3	Associate Professor		Teaching, Research and Service	2004- 2010

Experience Details: Industrial

No.	Post held	Organization	Nature of duties	Experience
1	Group Leader, Manufacturing & Engg.	**Alcatel, North Caroline, USA.**	Optical fiber research, development & manufacturing.	2000-2002
2	Section Leader, Engineering.		Optical fiber development using MOCVD and plasma deposition	1996-2000
3	Senior Process Engineer		Optical fiber development, technical leadership	1994-1996
4	Assistant Director	**NSF,USA**	Industry/ University Cooperative Research on Multiphase Flow. Ohio U.	1992 - 93
5	Assistant Executive	**ONGC,**	Bombay High offshore	1984 - 88

	Engineer.	**Mumbai**	operations.	
6	Project Engineer	**Davy Power-gas, India**	In-charge of chemical and petrochemical projects	1982 - 84

Educational Qualification

S. No.	Qualification	University/ Institution	Area	% of marks obtained	Year
1	**Ph.D.**	Ohio University- Athens, Ohio, USA.	Chemical Engineering	3.9/4.0	1989-92
2	**M. Tech.**	University Colleges of Science & Technology Calcutta University, India.	Chemical Engineering	76%	1979-81
3	**B.Tech.**	University Colleges of Science & Technology, Calcutta University, India.	Chemical Engineering	76.2%	1976-79

RESEARCH AREA

- Research activities include broadly in the field of Advanced Material Processing using RF Plasma
- Antimicrobial coating
- Waste Water Engineering
- Surface Modification & Engineering of Polymer Substrates for Biomedical Application
- Radio Frequency Plasma Enhanced Chemical Vapor Deposition
- Industrial Pollution Control/Project Engineering & Management
- Plasma Sterilization
- Polymer composites

ACHIEVEMENTS AND HONOURS

- Recipient of University of Calcutta Young Alumnus Award.
- Life Member of the Indian Institute of Chemical Engineers (IIChE)
- Member, West Bengal Pollution Control Board (WBPCB), Govt. of West Bengal
- Member, High Power Committee on Environment, W. B. Government
- Chairman (Ex), State Level Expert Appraisal Committee (SEAC) Environment, Govt. of West Bengal

- Member, Governing body of Institute of Environmental Studies and Wetland Management, Govt. of West Bengal
- Member (Ex) Rain Water Harvesting Committee by Ministry of Environment, Govt. of West Bengal
- Member (Ex)Mobile Tower Radiation Committee by Ministry of Environment, Govt. of West Bengal
- Member (Ex) Sponge Iron Industries : Status of Environmental Pollution Investigation Committee by Ministry of Environment, Govt. of West Bengal
- Member (Ex) Refrigerants in Cold Storage review Committee, WBPCB, Govt. of West Bengal.

PATENTS

1. Implantable Device having Antimicrobial coating and a method of Manufacturing the same, Prof.Sujoy K. Guha and Prof.SudarsanNeogi, Patent filed, January 2, 2008 Application No 6/KOL/2008
2. Vaginal Microencapsulated Effervescent Contraceptive and its delivery system, S. Banerjee, Prof.Sujoy K. Guha and Prof.SudarsanNeogi. Patent filed, July 11, 2008. Application No.1984/KOL/2008
3. Vehicle Capable of Dissipating Explosion Force & Energy. Sujoy. K. Guha, SudarsanNeogi, US Patent App 13/801,292
4. Plasma Treated Molding composition and Process for modifying a surface thereof. P.K.Guha,M J Siwajek, B A Huskell and **S. Neogi**, US Patent App 13/555,590.

TECHNOLOGIES DEVELOPED

1. Shatter proof glass window for use in Army vehicle for protection against explosive attack.
2. Plasma Treated polymer molding for improved surface adhesion properties
3. Vaginal Microencapsulation effervescent contraceptive for improved delivery system
4. Antimicrobial Coating for implantable device
5. Rice mill effluent Treatment plant for water saving by recycling.

BOOK CHAPTERS

1. Gomathi, N., Chanda, A. K., **Neogi, S. (**2013). Atmospheric Plasma Treatment of Polymers for Biomedical Applications, Eds. Thomas, M., Mittal, K. L. In: *Atmospheric Pressure Plasma Treatment of Polymers: Relevance to Adhesion*, Wiley Scrivener.
2. Gomathi, N., Mishra, D., Maiti, T. K., **Neogi, S.** (2010). Helium Plasma Treatment to Improve Biocompatibility and Blood Compatibility of Polycarbonate, Eds. Carre, A.,

Mittal, K. L. In: *Surface and Interfacial Aspects of Cell Adhesion*, VSP, LEIDEN, BOSTON.

3. Bhattacharya, P., and **Neogi, S**. (2017): Techniques for Deposition of Coatings with Enhanced Adhesion to Bio-Implants. Adhesion in Pharmaceutical, Biomedical and Dental Fields 235-255.

COURSES DEVELOPED/TAUGHT

Biochemical Engineering, 3-0-0 (UG and PG)

Industrial Pollution Control 3-1-0 (UG and PG)

Project Engineering & Management 3-0-0 (UG and PG)

Environmental Science 3-0-0 (UG)

Chemical Reactor Analysis 3-1-0 (UG)

NO. OF PHD STUDENTS GUIDED

Completed: 11

Ongoing: 11

NO. OF M. TECH. STUDENTS GUIDED

Completed: 40

Ongoing: 2

NO. OF B. TECH. STUDENTS GUIDED

Completed: 36

Ongoing: 3

INTERNATIONAL VISITS

ACADEMIC

Attended annual International Conference of Plasma Chemistry (ISPC) in Minnesota, USA, Toronto, Canada, Beijing China, Prague, Czech Republic;1994-2000

Attended European Conference on Plasma Processing in Strasbourg Germany, St. Petersburg, Russia 1998

Attended American Institute of Chemical Engineers (AIChE) conference in Los Angeles, USA,1992

Attended American Chemical Society meeting in, Boston, USA,2010

Attended Adhesion Society meeting in USA, Istanul, Turkey, 2015

Attended invited Technical Meeting in Maritime University, Ho Chi Minh city, Vietnam,2017

Attended Society of Petroleum Engineers Meeting in Melbourne, Australia.,1992

INDUSTRIAL

As Plasma Section Leader in ALCATEL, USA coordinated with the corporate Research section in Paris, France for Optical Fiber Development and processing. Extensively worked in other units of ALCATEL in France and Germany also.

CONSULTANT TO INDUSRIES

AT&T Bell LaB, USA 2004

Sterlite Optical Fiber Industries, Aurangabad, India 2003-05

PRODUCT/PROCESS/PROTOTYPE DEVELOPED

Enhanced Plasma Enhanced Deposition process for Optical Fiber processing for ALCATEL USA

Shatter Proof Window glass reinforcement and coating for ARMY VEHICLES, 15 Crops INDIAN ARMY, Jammu and Kashmir, India

Application of Pulsed Corona Discharge process for Waste water processing, Department of Chemical Engineering, IIT Kharagpur

PEER-REVIEWED PUBLICATIONS

1. D. Roy, **S. Neogi**, S. De, 2020, Adsorptive removal of heavy metals from battery industry effluent using MOF incorporated polymeric beads: a combined experimental and modeling approach, Journal of Hazardous Materials (accepted).
2. G. Narsimha, **S. Neogi**, B. K. Dutta, 2020, Parametric and Rate Studies of Reduction of Cr (VI) in Slurry of Contaminated Soil with Hydrazine and Sonochemical augmentation

, Soil and Sediment Contamination: An International Journal, https://doi.org/10.1080/15320383.2020.1783507
3. A. Dey, P. Bhattacharya, **S. Neogi,** 2020, Bioadhesives in Biomedical Applications: A Critical Review, Reviews of Adhesion and Adhesives, 8, 130-152(23).
4. M. Choudhary, R. Kumar, **S. Neogi**, 2020, Activated biochar derived from Opuntiaficus-indica for the efficient adsorption of malachite green dye, Cu^{+2} and N^{i+2} from water, J. Hazard. Mater. 392, 122441
5. D. Paul, S. Mangla, **S. Neogi**, 2020, Antibacterial study of CuO-NiO-ZnO trimetallic oxide nanoparticle, Mater. Lett., 271, 127740
6. D. Pal, **S. Neogi**, S. De, 2019, Comparative study of hydrophilic modification of polyacrylonitrile membranes by nitrogen and carbon dioxide RF plasma, PolymEngSci, 59, 10, 2148-2158
7. P. Bhattacharya, S. Swain, L. Giri, **S. Neogi**, 2019, Fabrication of magnesium oxide nanoparticles by solvent alteration and their bactericidal applications, J. Mater. Chem. B. 7, 4141-4152
8. I. Sengupta, P. Bhattacharya, M. Talukdar, **S. Neogi**, S.K. Pal, S. Chakraborty, 2019 Bactericidal effect of graphene oxide and reduced graphene oxide: Influence of shape of bacteria, Colloids Interface Sci. Commun. 28, 60–68.
9. D. Paul, **S. Neogi**, 2019. Synthesis, characterization and a comparative antibacterial study of CuO, NiO and CuO-NiO mixed metal oxide. Materials Research Express, 6(5), 055004.
10. A. Dey, **S. Neogi**, 2019. Oxygen scavengers for food packaging applications: A Review. Trends in Food Science & Technology 90, 26-34
11. M. Choudhary M, Ray, **S. Neogi**, 2018, Evaluation of the potential application of cactus (Opuntiaficus-indica) as a bio-coagulant for pre-treatment of oil sands process-affected water, Separation and Purification Technology 209, 714-724.
12. A. Mullick., **S. Neogi** 2019, Ultrasound assisted synthesis of Mg-Mn-Zr impregnated activated carbon for effective fluoride adsorption from water, UltrasonicsSonochemistry 50, 126-137
13. P. Bhattacharya., **S. Neogi** 2019, Antibacterial properties of doped nanoparticles, Reviews in Chemical Engineering, 35, 861–876
14. A. Mullick A., **S. Neogi** 2018, Acoustic cavitation induced synthesis of zirconium impregnated activated carbon for effective fluoride scavenging from water by adsorption, UltrasonicsSonochemistry 45, 65-77.
15. L. Jothi, **S. Neogi**, S.Jaganathan, G.Nageswarana, 2018, Simultaneous determination of ascorbic acid, dopamine and uric acid by a novel electrochemical sensor based on N_2/Ar RF plasma assisted graphene nanosheets/graphene nanoribbons, Biosens. Bioelectron, 105, 236-242
16. D. Pal, **S. Neogi**, S. De, (2018). Hydrophilic surface modification of polyacrylonitrile based membrane: effect of low temperature radio frequency carbon dioxide plasma. Polymer Bulletin, 75(8), 3567-3586.
17. M. Choudhary, **S. Neogi**, 2017, A natural coagulant protein from Moringaoleifera: isolation, characterization, and potential use for water treatment, Materials Research Express 4(10), 105502.

18. S. Thakur, N. Hashim, **S. Neogi**, A. K. Ray., 2017, Size-dependent adsorption and conformational changes induced in bovine serum albumin (BSA) on exposure to titanium dioxide (TiO2) nanoparticles, Separation Science and Technology 52(3), 421-434.
19. A. Mullick, **S. Neogi**, 2016, A review on acoustic methods of algal growth control by ultrasonication through existing and novel emerging technologies, Reviews in Chemical engineering, DOI: 10.1515/revce-2016-0010.
20. A. Mullick, **S. Neogi**, 2016, Synthesis of potential biosorbent from used stevia leaves and its application for malachite green removal from aqueous solution: kinetics, isotherm and regeneration studies, **RSC Advances** 6, 65960–65975.
21. D. Pal, **S. Neogi**, S. De, 2016, Improved antifouling characteristics of acrylonitrile co-polymer membrane by low temperature pulsed ammonia plasma in the treatment of oilewater emulsion, **Vacuum** 131, 293-304.
22. S. Thakur, D. Pal, **S.Neogi**, 2016, Prevention of biofilm attachment by plasma treatment of polyethylene, **Surface Innovations** 4(1), 33-38.
23. D. Pal, **S. Neogi**, S. De, 2015, Surface modification of polyacrylonitrile co-polymer membranes using pulsed direct current nitrogen plasma, **Thin Solid Films** 597, 171–182
24. S.Majumder, M. D. Kaulaskar, **S.Neogi**, 2015, Biosteel: an exciting product from nature that is superior to many manmade alternatives, **Reviews in Chemical Engineering** 31(5), 509-519.
25. N. Gomathi, I. Mishra, S. Varma, **S. Neogi**, 2015, Surface modification of poly(dimethylsiloxane) through oxygen and nitrogen plasma treatment to improve its characteristics towards biomedical applications, **Surface Topography: Metrology and Properties** 3, 035005.
26. S. Thakur, **S. Neogi**, 2015, Tailoring the Adhesion of Polymers using Plasma for Biomedical Applications: A Critical Review, **Reviews of Adhesion and Adhesives** 3 (1), 53-97.
27. M. Choudhary, S. Majumder, **S. Neogi**, 2015, Studies on the Treatment of Rice Mill Effluent by Electrocoagulation, **Separation Science and Technology** 50 (4), 505-511.
28. A.K. Chanda, A. Hazra, M.P. Kumar, S.Neogi, **S.Neogi**, 2015, Chemical Treatments of Rice Husk Filler and Jute Fiber for the use in Green Composites, **Fibers and Polymers** 16 (4), 902-910.
29. L.G. Nair, A.S. Mahapatra, N. Gomathi, K. Joseph, **S. Neogi**, C.P.R. Nair, 2015, Radio Frequency Plasma Mediated Dry Functionalization of Multiwall Carbon Nanotube, **Applied Surface Science** 340, 64-71.
30. L. Parida, **S. Neogi**, V Padmanabhan, 2014, Effect of Temperature Pre-Exposure on the Locomotion and Chemotaxis of C.elegans, **PLoS One** 9 (10), e111342.
31. J. Lavanya, N. Gomathi, **S. Neogi**, 2014, Electrochemical performance of nitrogen and oxygen radio-frequency plasma induced functional groups on tri-layered reduced grapheme oxide, **Materials Research Express** 1 (2), 025604.
32. A. K. Chanda, **S. Neogi**, **S. Neogi**, 2013, Optimization of Plasma Treatment for Enhanced Filler Matrix Adhesion in Manufacturing Green Composites with Rice Husk, **Indian Chemical Engineer** 55 (3), 177-188.

33. Gomathi, N, Rajasekhar R, Rajesh Babu R, DebashisMisra, **Neogi S**., 2012, Development of Bio/Blood Compatible Polypropylene through Low Pressure Nitrogen Plasma Surface Modification, **Materials Science and Engineering: C**, 32 (7), 1767-1778
34. Chauhan, V., **Neogi, S**., Varma, A., Guha, S. K., 2011, Optical Emission Spectroscopy Study and 3-D Surface Characterization of Silicon Rubber Exposed to Different Argon RF Plasma Powers, **Journal of Adhesion Science and Technology**, DOI:10.1163/1568561111
35. Sumana Das, **SudarsanNeogi**, Chainy, G.B.N. and Sujoy K. Guha, 2011, A Novel Two-Step Procedure for Plasma Surface Modification of Low-Density Polyethylene for Improved Drug Adhesion in Intra Uterine Devices, **Journal of Adhesion Science and Technology,** 25,1-3, 151-167.
36. N. Gomathi, D. Mishra, T.K. Maiti, **S. Neogi**, 2010, Helium plasma treatment to improve biocompatibility and blood compatibility of polycarbonate, **Journal of Adhesion Science and Technology,** 24(13-14), 2237-2255.
37. A. Sureshkumar, R. Sankar, M. Mandal, **S. Neogi**, 2010, Effective bacterial inactivation using low temperature radio frequency plasma, **International Journal of Pharmaceutics,** 396 (1), 17-22.
38. G. C. Basak, A. Bandyopadhyay, **S. Neogi**, and A. K. Bhowmik, 2010, Surface Modification of Argon/Oxygen Plasma Treated Vulvsnized Ethylene Propylene DienePolymethylene Surfaces for Improved Adhesion with Natural Rubber, **Journal of Applied Surface Science,** 257 (7), 2891-2904.
39. S. Doorwar, **S. Neogi**, SaikatChakraborty, 2010, A Multiscale Modeling of Quantifying Helium Diffusion in Porous Unsintered Glass, **The Canadian Journal of Chemical Engineering,** 88, 2, 153-160.
40. A Sureshkumar, and **S. Neogi**, 2009, Inactivation characteristics of bacteria using capacitively coupled argon plasma, **IEEE Transactions on plasma science**, 37(12), 2347-2352.
41. N. Gomathi, Mishra, D., Maity, T. K**., S. Neogi**., 2009. Enhanced cell adhesion to helium plasma treated polypropylene, **Journal of Adhesion Science and Technology**, 23, 1861-1874.
42. N. Gomathi, and **S. Neogi**. 2009. Investigation on argon-oxygen plasma induced blood compatibility of polycarbonate and polypropylene. **Journal of Adhesion Science and Technology** 23, 1811-1826.
43. N**.** Gomathi, Eswaraiah, C., **S. Neogi** 2009, Surface modification of polycarbonate by radio-frequency plasma and optimization of the process variables using response surface methodology, **Journal of Applied Polymer Science** 114, 1557-1566.
44. N**.** Gomathi, and **S. Neogi**. 2009, Surface modification of polypropylene using argon plasma: statistical optimization of the process variables, **Applied Surface Science** 255, 7590-7600.
45. N**.** Gomathi, Venkataprasad, K., **S. Neogi**, 2009, Preparation and characterization of thin films of the poly(p-phenylenevinylene) semiconducting polymer, **Journal of Applied Polymer Science** 111, 1917-1922.

46. N**.** Gomathi, Sureshkumar, A., **S. Neogi**, 2008, RF plasma treated polymers for biomedical applications, **Current Science.** 94 (11) 1478-1486.
47. L.M. Miller, **S. Neogi** ,and Gulino, D.A., 1992, Al_2O_3 and Al_2O_3/SiO_2 Coatings for high Temperature Thermo Oxidative Stability of Polyimide Composites, **HITEMP Review** (Advanced High Temperature Engine Materials Technology Program), NASA CP10104, 1992, pp 7-1 to 7-8.
48. **S. Neogi** and Gulino, D.A., 1992, High Temperature Oxidative Resistance of SiO_2 Coated Polyimide, **AIChE Journal**, 38 (9), 1379-1384.
49. **S. Neogi**, Ingram, D.C. and Gulino, D.A., Improved Adhesions of Silicon Dioxide Thin Film to Polyimide Composites by Ion Implantation, **HITEMP Review 1991** (Advanced High Temperature Engine Materials Technology Program), NASA CP10082, 1991, A11-1 to A11-10
50. **S. Neogi.** and D.A. Gulino, Chemical Vapor Deposition of Several Silicon based Dielectric Films,**Materials and Manufacturing Processes** 6 (3), 433-449.

CONFERENCE PRESENTATION

1. Narsimha G., **Neogi S.**, Dutta B. K. Reduction of Cr (VI) in Contaminated Soil, Presented at Indian Chemical Engineering Congress, 70th Annual Session of Indian Institute of Chemical Engineers (CHEMCON- 2017), Haldia Institute of Technology, West Bengal, India, December 27-30, 2017.
2. Narsimha G., **Neogi S.**, Dutta B. K. Remediation of Cr (VI) - Contaminated Soil using Hydrazine, Presented at 2019 AICHE Spring Meeting and 15th Global Congress on Process Safety, New Orleans, USA, March 31 to April 4, 2019.
3. Bhattacharya P, **Neogi S** Effect of Ethanol Solvent on Antimicrobial Efficiency of Magnesium Oxide Nanoparticles - AIChE Annual Meeting, 28 October 2018-2 November 2019, Pittsburgh; United States
4. Paul D. **Neogi S**, Synthesis, Characterization and Antibacterial Study of Copper-Nickel Bimetallic and Mixed Metal Oxide Nanocomposite, AIChE Annual Meeting, 28 October 2018-2 November 2019, Pittsburgh; United States
5. Sinha S., Roy D., De S., **Neogi S**., Application of advanced oxidation process for the treatment of hydrofracked water, AIChE Annual Meeting, 28 October 2018-2 November 2019, Pittsburgh; United States
6. Dey, A and Giri, L. and **Neogi, S** Novel fluorescent nano structures for bio-imaging of MCF-7 cellsAIChE Annual Meeting, 28 October 2018-2 November 2019, Pittsburgh; United States
7. Gomathi, N., **Neogi, S.**, "Improving bio and blood compatibility of polymers using plasma", **National workshop on plasma technology for biomedical application**, March 2009, IIT Kharagpur
8. Sureshkumar, A., **Neogi, S.**, "Plasma sterilization", **National workshop on plasma technology for biomedical application**, March 2009 .IIT Kharagpur

9. Gomathi, N., Mishra, D., Maity, T.K. and **Neogi, S.,** "Low Pressure Radio Frequency Plasma Treatment of Polypropylene for Improved Cell Adhesion", **Seventh international symposium on Polymer Surface Modification: Relevance to Adhesion**, July 2009, Orono, Maine USA.
10. Gomathi, N., Mishra, D., Maity, T.K. and **Neogi, S.** 2009, "Surface modification of polypropylene using argon plasma for biomedical applications", **ISPC** 19, Bochum, Germany.
11. Sureshkumar, A., Shankar, R., Gomathi, N. and **Neogi, S.,** 2009, "Sterilization of Staphylococcus aureus using Ar and Ar/O_2 plasma", **ISPC** 19, Bochum, Germany.
12. Gomathi, N., Sureshkumar, A. and **SudarsanNeogi.**, 2009, "Surface modification of Polycarbonate by argon plasma treatment for biomedical applications", **International Conference on Hi-Tech Materials**, (ICHTM-09) organized at IIT, Kharagpur, India.
13. Gomathi, N. and **Neogi, S.**, 2008, "Role of plasma in biomedical applications", presented in **Symposium on Nano-Bioengineering and Family Welfare**, IIT, Kharagpur, organized by Ministry of Health and Family Welfare.
14. Gomathi, N., Suresh Kumar, A., and **SudarsanNeogi**, "Surface modification of Polypropylene by RF plasma for biomedical applications", **Chemcon** 2007 organised by IICHE at Kolkata.
15. Sumana Das, **SudarsanNeogi**, SamitK.Ray and Sujoy K. Guha, "Plasma surface modification of Low-Density Polyethylene for functionalization in medical devices (IUDs)", Proceedings of **ISPC**-18, August 2007, Kyoto, Japan.
16. Venkat Prasad. K., Gomathi, N. and **SudarsanNeogi**, "Development and characterization of semiconducting polymer thin films for optoelectronic Applications", **Chemcon** December 2006 organised by IICHE at Bharuch.
17. **S. Neogi**, Humbert, P, Goudeau, J, "Plasma technology for the Optical Fiber Industries" an invited lecture delivered at the **15th International Symposium of Plasma Chemistry (ISPC XV)**, Orleans, France, July 2001.
18. **S. Neogi**, "Application of Plasma Technology for the Optical Fiber Industry", published at the **3rd International conference on Plasma Physics and Plasma Technology**", Minsk, Belarus, September 2000.
19. **S. Neogi** and Marin, J, "Application of RF Induction Plasma for Optical Waveguide Manufacture", presented at the **13th International Symposium of Plasma Chemistry** Beijing, China, August 1997.
20. **S. Neogi**, Lee, A.H., and Jepson, W.P., "A Model for Multiphase (Gas-Water-Oil) Stratified Flow in Horizontal Pipelines", Presented at the **SPE Asia-Pacific Oil & Gas Conference**, Melbourne, Australia, November 1994.
21. **S. Neogi**, Lee, A.H., and Jepson, W.P., "Modeling of the Multiphase Flow Transitions in Oil-Water-Gas Mixtures", Presented at the **AIChE Annual Meeting,** St. Louis, Missouri, November 7-11, 1993.
22. **S. Neogi**, Gulino, D.A., Diethylsilane as Precursor for the Low Temperature Deposition of SiO_2 by LPCV onto Polyimide Composites", Presented at the **AIChE Annual Meeting**, Miami, FL, November 1-6, 1992.

RESEARCH/CONSULTANCY PROJECTS

Sl No	Title	Sponsoring Agency	Amount (in lakhs)	Status
	As Principal Investigator			
1	Water management during hydrofracking operations of shale gas field	ONGC	177.56	Ongoing
2	Academic Mentoring To Set Up IIPE (Indian Institute Of Petroleum & Energy), Vizag	Indian Institute of Petroleum and Energy	540.0	Ongoing
3	Development & surface immobilization of nano particles in glass & PET bottles	United Spirits Limited	8.0379	Ongoing
4	In Situ leaching of Uranium	ONGC	413.57	Ongoing
5	Blast protection system for vehicle glass windows	Army Technical Board, Govt. of India	49.20	Completed
6	Plasma treatment of SMC on surface energy and orange peel index of painted substrates	CSP Plastics, Troy, Michigan, USA	4.086	Completed
7	Appraisal of DPR on Solid Waste Management for different Cities of Odisha	Housing and Urban Development Department, Govt. of Odisha	37.375	Completed
8	Synergism and antagonism in concurrent exposure to Microwave Radiation (Mobile Telephoning) and extra low frequency(50Hz) electromagnetic fields	SRIC, IIT Kharagpur	43.68	Completed
9	Antimicrobial coating on plasma treated substrates for biomedical application	DRDO, Govt. of India	20.00	Completed

10	Process simulation & material balance of urban plant	ONGC	6.477	Completed
11	Development & characterization of thin film coating for optoelectronic applications	IIT KGP	3.00	Completed
12	Synthesis and engineering of advanced materials using radio frequency plasma for chemical micro-electric biochemical and biomedical applications	DST, Govt of India	58.13	Completed
	As Co-Principal Investigator			
1	Hand Sanitizer Formulation Development and Mechanical Design of Pilot Plant	PfP Industries LLC, USA	6.5	Ongoing
2	Development of Light Weight Composite Cylinder for Storage of Compressed Natural Gas (CNG): Phase 2	GAIL (India) Limited	177.35	Ongoing
3	Development of Filament Wound Type 3 Composite Cylinder for the Storage of Compressed Hydrogen Gas	Indian Oil Corporation Ltd	968.48	Ongoing
4	Low Pressure Nano-filtration for Removal of Monovalent and Bivalent Salts from Leached Liquor during Alkaline Uranium Ore Processing	AERB, India	23.6	Ongoing
5	Renewable resource/ bio-based low density SMC development	CSP Plastics, Troy, Michigan, USA	32.20	Completed
6	Heat transfer simulations and measurement of thermal properties of sheet molding compound	CSP plastics, Troy, Michigan USA	22.198	Completed

7	Oil & Gas Production/Recovery Enhancement	KDMIPE, ONGC, India	4.45	Completed
8	Development of FRP - Nano composite for marine structural application	DRDO, Govt. of India	42.96	Completed
9	Estimation of lifetime and life cycle cost of FRP pipes manufactured using various technologies for offshore & onshore applications	ONGC, India	30.00	Completed
10	Locomotion and chemotaxis of the nematode caenorhabditiselegans in complex media	DST, Govt. of India	27.156	Completed
11	Lifetime study on nano-FRP for underwater application	DRDO, Govt. of India	19.992	Completed
12	Modeling and Simulation of Shrinkage and Warpage of Autoclave Molded Composite Components	ISRO, IIT Kharagpur Cell,	21.75	Completed
13	Optical Fiber Embedded Smart Composites for Offshore & Onshore Applications	ONGCIndia	177.79	Completed
14	Development of Hybrid Armor Panels Incorporating Shear Thickening Fluids	DRDO, Govt. of India	22.50	Completed