

Profile Page



Name : Dr N C Kothiyal

Designation : Professor Hag

Department : Chemistry

Qualification : PhD Synthesis of Petroleum Sulfonates From Indigenous Oils and Characterization of the Products (IIT-ISM Dhanbad)
M.Sc. Chemistry (Central University Uttarakhand)
B.Sc. Chemistry, Zoology, Botany (Central University Uttarakhand)

Address : Department of Chemistry
Dr B R Ambedkar National Institute of Technology
Jalandhar, Punjab - 144 011

Email : kothiyalnc@nitj.ac.in

Phone : 0181-2690301-02, Ext. 2204

Research Interests :

1. Nano Composites
2. Polycyclic aromatic Hydrocarbons
3. Environmental Chemistry and Micro Pollutants
4. Surface Active compounds and their Characterization
5. Natural Products Chemistry

Other Profile Links :

Personal Web Link :

Dr N.C. Kothiyal [Click Here](#)

Journal Publications :

| Year | Journal | Publication |
|------|--|--|
| 2016 | Journal of Adhesion Science and Technology, Vol. 30, Pages 915-933 | N. C. Kothiyal, Snigdha Sharma, Swati Mahajan & Sapna Sethi, "Characterization of reactive graphene oxide synthesized from ball milled graphite: its enhanced reinforcing effects on cement nanocomposites" |
| 2016 | RSC Advances, Vol. 6, Pages 103993-104009 | Snigdha Sharma, N. C. Kothiyal and Mani Chitkara, "Enhanced mechanical performance of cement nanocomposite reinforced with graphene oxide synthesized from mechanically milled graphite and its comparison with carbon nanotubes reinforced nanocomposite" |

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|------|--|---|
| 2016 | Construction and Building Materials, Vol. 123, Pages 829-846 | Snigdha Sharma and N. C. Kothiyal, "Facile growth of carbon nanotubes coated with carbon nanoparticles: A potential low-cost hybrid nanoadditive for improved mechanical, electrical, microstructural and crystalline properties of cement mortar matrix" |
| 2016 | International Journal of Biological Macromolecules, Vol. 84, Pages 340-348 | Deepak Pathania, Divya Gupta, N.C. Kothiyal, Gaurav Sharma, G.E. Eldesoky and Mu. Naushad, "Preparation of a novel chitosan-g-poly(acrylamide)/Zn nanocomposite hydrogel and its applications for controlled drug delivery of ofloxacin" |
| 2016 | Construction and Building Materials, Vol. 115, Pages 256-268 | Snigdha Sharma and N. C. Kothiyal, "Comparative effects of pristine and ball-milled graphene oxide on physico-chemical characteristics of cement mortar nanocomposites" |
| 2015 | Journal of Industrial and Engineering Chemistry, Vol. 21, Pages 957-964 | Vinod Kumar Gupta, Gaurav Sharma, Deepak Pathania and N.C. Kothiyal, "Nanocomposite pectin Zr(IV) selenotungstophosphate for adsorptional/photocatalytic remediation of methylene blue and malachite green dyes from aqueous system" |
| 2015 | International Journal of Industrial Chemistry, Vol. 6, Pages 43-58 | Suriti Sharma, Navin Chandra Kothiyal, Bhim Singh Rathore and Sumit Sharma, "Use of cellulose acetate-tin (IV) phosphate composite (CA/TPC) in highly effective removal and recovery of heavy metal ions" |
| 2015 | Journal of Analytical and Applied Pyrolysis, Vol. 115, Pages 401-409 | M. Aslam, L. J. Konwar, A. K. Sarma and N. C. Kothiyal, "An investigation of catalytic hydrocracking of high FFA vegetable oils to liquid hydrocarbons using biomass derived heterogeneous catalysts" |
| 2015 | RSC Advances, Vol. 5, Pages 52642-52657 | Snigdha Sharma and N. C. Kothiyal, "Influence of graphene oxide as dispersed phase in cement mortar matrix in defining the crystal patterns of cement hydrates and its effect on mechanical, microstructural and crystallization properties" |
| 2015 | Composite Interfaces, Vol. 22, Pages 899-921 | Snigdha Sharma and N. C. Kothiyal, "Synergistic effect of zero-dimensional spherical carbon nanoparticles and one-dimensional carbon nanotubes on properties of cement-based ceramic matrix: microstructural perspectives and crystallization investigations" |
| 2015 | Journal of Analytical and Applied Pyrolysis, Vol. 115, Pages 1-9 | Mohammad Aslam, Lakhya Jyoti Konwar, Anil Kumar Sarma and N.C.Kothiyal, "An investigation of catalytic hydrocracking of high FFA vegetable oils to liquid hydrocarbons using biomass derived heterogeneous catalysts" |
| 2015 | International Journal of Biological Macromolecules, Vol. 74, Pages 547-557 | Divya Gupta, Devender Singh, N.C. Kothiyal, Adesh K. Saini, Virender Partap Singh and Deepak Pathania, "Synthesis of chitosan-g-poly(acrylamide)/ZnS nanocomposite for controlled drug delivery and antimicrobial activity" |
| 2014 | Chemical Engineering Journal (Elsevier), Vol. 251, Pages 413-421 | Gaurav Sharma, Deepak Pathania, Mu Naushad, N C Kothiyal, "Fabrication, Characterization and antimicrobial Activity of polyaniline Th(IV) tungstomolybdophosphate composite material:Efficient removal of toxic metal ions from water" |
| 2014 | Clean Technologies and Environ Policy, Vol. 17, Pages 175-185 | Mohammad Aslam, N. C. Kothiyal & A. K. Sharma, "True boiling point distillation and product quality assessment of biocrude obtained from Mesuaferrea L. seed oil via hydroprocessing" |
| 2014 | Journal of Molecular Liquids, Vol. 190, Pages 139-145 | V K Gupta, D Pathania, N C Kothiyal, G Sharma, "Polyaniline zirconium (IV) silicophosphate nanocomposite for remediation of methylene blue dye from waste water" |
| 2014 | Journal of Earth System Science, Vol. 123, Pages 479-489 | Vaneet Kumar, N C Kothiyal, Saruchi, R Mehra, A Parkash, R R Sinha, S K Tayagi and R Gaba, "Determination of some carcinogenic PAHs with toxic equivalency factor along roadside soil within a fast developing northern city of India" |

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| 2014 | Polish Journal of Chemical Technology, Vol 16, Pages 48-58 | Vaneet Kumar, N.C. Kothiyal and Saruchi, "Studies on carcinogenic PAHs emission generated by vehicles and its correlation to fuel and engine types" |
| 2014 | Journal of Alloys and Compounds, Vol. 588, Pages 668-675 | Deepak Pathania, Gaurav Sharma, Amit Kumar and N.C. Kothiyal, "Fabrication of nanocomposite polyaniline zirconium(IV) silicophosphate for photocatalytic and antimicrobial activity" |
| 2014 | International Journal of Research in chemistry and Environment, Vol. 4, Pages 50-62 | Vaneet Kumar, Kothiyal N C & Saruchi, "Photochemical Degradation of Some Polycyclic Aromatic Hydrocarbons (PAH) in Laboratory Conditions" |
| 2014 | Journal of the Chinese Advanced Materials Society, Vol. 2, Pages 82-98 | Vaneet Kumar, N.C. Kothiyal, Saruchi & Amit Masih, "Environmental fate and behavior of some PAHs at roadside ambient air in a fast developing city environment of northern India" |
| 2014 | Journal of Environmental Research And Development, Vol. 8, Pages 395-405 | N. C. Kothiyal, Vaneet Kumar and Gurjeet, Priyanka, "Bioremediation of some polycyclic aromatic hydrocarbons (pah) from soil using Sphingobium indicum, Sphingobium japonicum AND Stenotrophomonas maltophilia bacterial strains under aerobic conditions" |
| 2013 | Carbohydrate Polymers, Vol. 96, Pages 277-283 | Vinod Kumar Gupta, Shilpi Agarwal, Deepak Pathania, N.C.Kothiyal and Gaurav Sharma, "Use of pectin-thorium (IV) tungstomolybdate nanocomposite for photocatalytic degradation of methylene blue" |
| 2013 | Environmental science and pollution research, Vol. 20, Pages 8986 - 8995 | Sumit Sharma and Navin Chandra Kothiyal, "Use of Activated Dry Flowers (ADF) of Alstonia Scholaris for Chromium (VI) removal: Equilibrium, Kinetics and Thermodynamics studies" |
| 2013 | International Journal of Environment and Pollution, Vol. 51, Pages 57-78 | Sapna Sethi, N. C. Kothiyal and Arvind K. Nema, "Stabilization of municipal solid waste in bioreactor landfills - An overview" |
| 2013 | The Holistic Approach to Environment, Vol. 3, Pages 63-82 | Navin Chandra Kothiyal and Sumit Sharma, "Study of chromium (vi) adsorption using pterospermumacerifolium fruit capsule activated carbon (fcac) and commercial activated charcoal (cac) as a selective Adsorbents" |
| 2013 | Journal of Hazardous, Toxic and Radioactive Waste, Vol. 17, Pages 97-106 | Sapna Sethi, N. C. Kothiyal, Arvind K. Nema and M. K. Kaushik, "Characterization of Municipal Solid Waste in Jalandhar City, Punjab, India" |
| 2013 | Journal of Solid Waste Technology and Management, Vol. 39, Pages 173-181 | Sapna Sethi, N. C. Kothiyal and Arvind K. Nema, "Moisture Flow in Landfill Simulating Bioreactors Containing Municipal Solid Waste" |
| 2012 | Journal of Environmental Science and Engineering, Vol. 54, Pages 55-63 | Vaneet Kumar and N C Kothiyal, "Polycyclic Aromatic Hydrocarbons distribution and related carcinogenic potencies in roadside soil at major traffic intercepts within a developing city of northern India" |
| 2012 | The Holistic Approach to Environment, Vol. 2, Pages 3-22 | Navin Chandra Kothiyal and Sumit Sharma, "Removal of Cr (VI) From Aqueous Solution by Polymer based guar Gum-G-Poly (AAM) and Activated Charcoal Adsorbents" |
| 2012 | Journal of Environmental Science and Engineering, Vol. 54, Pages 323-330 | Sapna Sethi, N.C. Kothiyal and Arvind K Nema, "Validation of Enhanced Stabilization of Municipal Solid Waste under Controlled Leachate Recirculation Using FTIR and XRD" |
| 2011 | International Journal of Environment Science and Technology, Vol. 8, Pages 63-72 | Vaneet Kumar and N C Kothiyal, "Distribution behavior of polycyclic aromatic hydrocarbons in roadside soil at traffic intercepts within developing cities" |
| 2011 | Environmental Monitoring and Assessment, Vol. 184, Pages 6239 - 6252 | Vaneet Kumar and N C Kothiyal, "Distribution behavior and carcinogenic level of some polycyclic aromatic hydrocarbons in roadside soil at major traffic intercepts within a developing city of India" |
| 2011 | Electronic Journal of Environmental, Agricultural and Food Chemistry, Vol. 10, Pages 2900-2912 | N. C. Kothiyal, Deepak Pathania & Chetan Chauhan, "Remediation of Cr (VI) by low cost adsorbents and synthetic inorganic ion exchangers: A comparative study" |

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| 2011 | Asian Journal of Chemistry, Vol. 23, Pages 1363-1368 | Vaneet Kumar and N C Kothiyal, "Distribution Pattern and Contamination Levels of Some Polycyclic Aromatic Hydrocarbons Along Roadside Soil at Major Traffic Intercepts During Autumn in Jalandhar, India" |
| 2011 | Journal of Environmental Research and Development, Vol. 5, Pages 584-590 | Vaneet Kumar and N C Kothiyal, "Estimation of Polycyclic Aromatic Hydrocarbons (PAHs) in Diesel- Biodiesel Blends by GC Technique" |
| 2011 | International Journal of Reserach in Chemistry and Environment, Vol. 1, Pages 216-221 | Sapna Sethi, N. C. Kothiyal and Arvind K. Nema, "Preferential flow in Landfill Simulating Reactors" |
| 2011 | International Journal of Theoretical and Applied Science, Vol. 3, Pages 15-20 | Jagdeep Singh, N.C. Kothiyal and Deepak Pathania, "Synthesis of Highly Dispersed Single Walled Carbon Nanotubes from Furnace Oil and Light Diesel Oil by Modified Chemical Vapour Deposition Method" |

Conference Publications :

| Year | Conference | Publication |
|------|---|--|
| 2015 | Ukeri Concrete Congress, Concrete Research Driving Profit and Sustainability | N C Kothiyal & Snigdha Sharma, "Mechanical performance and Micro structure of Graphene oxide reinforced cement mortar composite" |
| 2013 | Ukeri Concrete Congress, Concrete Innovation in Concrete Construction | N C Kothiyal & Dimple, "Civil Engineering Applications of Raw Carbon Nanotubes as Composite in Mortar and Concrete (UCC 611)" |
| 2010 | 6th International Congress on Environmental Geotechnics, 8th - 12th Nov.2010 ,IIT New Delhi | Kothiyal, N.C., Neema A.K., Sethi S., "Study of Hydraulic Conditions in Simulated Landfill Bio reactor" |
| 2009 | 11th International conference on environmental science and Technology, Global NEST and University of the Aegean, Greece | Kumar Vaneet and Kothiyal N.C., "Qualitative and Quantitative study of some Polycyclic Aromatic Hydrocarbons generated by automobile exhaust as a function of fuels and engine type" |

Research Projects :

| Role | Project Type | Title | Funding Agency | From | To | Amount | Status | Co-Investigator |
|------|---------------|---|-----------------|------|------|---------|-----------|-----------------|
| | R & D Project | MODROB project | MHRD, New Delhi | | 1996 | 15 Lacs | Completed | |
| | R & D Project | Assessment and Control of lead pollution from vehicular emission in Urban Environment of Punjab | MHRD, New Delhi | 1999 | 2002 | 8 Lacs | Completed | |

Events Organized :

| Category | Type | Title | Venue | From | To | Designation |
|----------|------|-------|-------|------|----|-------------|
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|-------------------|---------------|--|--|--------------|--------------|--------------------|
| Workshop | National | Chemical Analysis of cement Concrete and Mortar | Department of Applied Chemistry, Regional Engineering College, Jalandhar | 27-Mar-1995 | 27-Mar-1995 | Coordinator |
| Workshop | National | Impact of Nonequilibrium Thermodynamics on contemporary Science and Technology | Department of Chemistry, NIT, Jalandhar | 24-Oct-2007 | 25-Oct-2007 | Coordinator |
| Workshop | National | Nurturance programme for National Talent Search Awardees | NIT, Jalandhar | 10-Jan-2011 | 15-Jan-2011 | Coordinator |
| Conference | National | National Chemical Constellation Cheminar | Department of Chemistry, NIT, Jalandhar | 20-Aug-2011 | 21-Aug-2011 | Convener |
| Conference | International | Chemical Constellation Cheminar-2012 | NIT, Jalandhar | 10-Sep-2012 | 12-Sep-2012 | Coordinator |
| Seminar | National | Intellectual Property and Innovation Management in Knowledge Era | NIT, Jalandhar | 28-Mar-2008 | 29-Mar-2008 | Coordinator |
| Workshop | National | Nurturance programme for National Talent Search Awardees | NIT, Jalandhar | 05-Jan-2009 | 09-Jan-2009 | Coordinator |
| Short Term Course | National | Advance Materials and Characterization Techniques | Department of Chemistry, NIT, Jalandhar | 01-June-2015 | 07-June-2015 | Chief Coordinators |
| Short Term Course | National | Current Opportunities and New Directions in chemical Sciences and Technology | Department of Chemistry, NIT, Jalandhar | 07-Dec-2015 | 13-Dec-2015 | Convener |
| GIAN programme | National | Nanotechnology Synthesis, Characterization, Fabrication and Applications | Department of Chemistry, NIT, Jalandhar | 06-June-2016 | 11-June-2016 | Coordinator |
| GIAN programme | National | Natural Smart Materials for Biomedical Applications | Department of Chemistry, NIT Jalandhar | 07-Nov-2016 | 11-Nov-2016 | Coordinator |

Professional Affiliations :

| Designation | Organization |
|----------------------------|--|
| Life Member | Indian Society for Surface Science and Technology, Calcutta (April 1998, Membership No.- LM/K-7) |
| Life Member | Indian Thermal Analysis Society, BARC, Mumbai (Membership No.- LM153) |
| Life Member | Indian Council of Chemists, Agra (Membership No.- LF-1553) |
| Fellow Member (F.I.C.E.R.) | Journal of Environmental Research and Development (JERAD), Nagpur (January 2011) |
| Life Member | Indian society for Technical Education, New Delhi (1994, Membership No.- LM18960) |
| Life Member | Hindi Vigyan Sahitya Prishad, BARC, Mumbai (December 1989, Membership No.- 428) |
| Life Member | Him Science Congress Association (HSCA) (September 2014, Membership No.-LM-93) |

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| Institutional Member | Association of Chemistry Teachers, Mumbai, (April 2016, Membership No. 1824) |
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PhD Supervised :

| Scholar Name | Research Topic | Status | Year | Co-Supervisor |
|----------------|--|-------------|------|---------------|
| Snigdha Sharma | Effect of Raw Carbon Nanotubes in Cement Mortar as Composite and Their Physico Chemical Characteristics | Awarded | 2017 | |
| Mohammad Aslam | Hydroprocessed Non Edible Vegetable Oil as Substitute to Crude Oil | Awarded | 2017 | |
| Divya Gupta | Zerovalent Iron Based Nanocomposites : Synthesis, Characterization and Applications | Awarded | 2016 | |
| Ramanjit Kaur | Cement Carbon based Nano Composites | In Progress | 2016 | |
| Gaurav Sharma | Analytical Applications of Some New Nano composite ion Exchangers | Awarded | 2014 | |
| Sapna Sethi | Enhanced Stabilization Of Municipal Solid Waste Under Controlled Leachate Recirculation in Simulated Landfill Bioreactors | Awarded | 2013 | |
| Vaneet Thakur | Studies on Some Polycyclic Aromatic Hydrocarbons Emitted in Urban Environment Of Jalandhar(India) and Their Photolytic Behaviour | Awarded | 2012 | |

Admin. Responsibilities :

| Position Held | Organization | From | To |
|---|---|---------------|-------------|
| Head, Department of Chemistry | Dr B R Ambedkar NIT, Jalandhar | 2005 | 2007 |
| Incharge Instrumental Chemical Analysis Lab | Department of Chemistry, NIT Jalandhar | 2003 onwards | |
| Coordinator PG Programme | Dr B R Ambedkar NIT, Jalandhar | | |
| Coordinator admission committee PhD & M.Sc. programme | Dr B R Ambedkar NIT, Jalandhar | | |
| Chairman Library Committee | Dr B R Ambedkar NIT, Jalandhar | 2006 | 2011 |
| Chairman Cultural Affairs | Dr B R Ambedkar NIT, Jalandhar | 2006 | 2012 |
| Chairman Rajbhasha Samiti | Dr B R Ambedkar NIT, Jalandhar | 01-Sep-2013 | 01-Sep-2014 |
| Chairman Rajbhasha Samiti | Dr B R Ambedkar NIT, Jalandhar | 05-Jan-2015 | 05-Jan-2016 |
| Chairman, Rajbhasha (Hindi Cell) | Dr B R Ambedkar NIT, Jalandhar | 28-April-2017 | onwards |
| Dean Faculty Welfare | Dr B R Ambedkar NIT, Jalandhar | 01-Feb-2015 | 24-Jan-2017 |
| Member, Board of Governors | Dr B R Ambedkar NIT, Jalandhar | 2011 | 2013 |
| Member, Finance Committee | Dr B R Ambedkar NIT, Jalandhar | 2012 | 2014 |
| Member Board of Studies, Chemical and Bio Engineering | Dr B R Ambedkar NIT, Jalandhar | 2007 | 2010 |
| Member, Academic Affairs Committee | Regional Engineering College, Jalandhar | 1990 | 1992 |
| Member Board of Studies Leather Technology | Regional Engineering College, Jalandhar | 1996 | 1998 |
| Member Grievances and Redressal Cell of faculty and staff | Dr B R Ambedkar NIT, Jalandhar | April 2015 | |
| Curriculum drafting and development of B.Tech, Leather Technology programme | Regional Engineering College, Jalandhar | 1995 | 1996 |
| Deputy Chief Warden | Dr B R Ambedkar NIT, Jalandhar | 1999 | 2001 |
| Warden Hostel No.1 | Regional Engineering College, Jalandhar | 1994 | 1995 |
| Warden Hostel No.1 | Regional Engineering College, Jalandhar | 1997 | 1999 |

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| Nodal Officer (Faculty), Swach Bharat Pakhwada | Dr B R Ambedkar NIT, Jalandhar | 01-Sep-2016 | 15-Sep-2016 |
| Coordinator "Utkansh: A National Level Cultural festival of NIT "as chairman Cultural Affairs | Dr B R Ambedkar NIT, Jalandhar | 2007 | 2011 |

Award and Honours :

| Title | Activity | Given by | Year |
|---|---|--|-------------|
| Best Paper Award | Estimation of Polycyclic Aromatic Hydrocarbons (PAH's) in Diesel- Biodiesel Blend by GC Technique Ist International Conference on New Frontiers in Biofuels | Delhi Technological University (DTU), New Delhi | 2010 |
| Member | Projects Review Committee | Uttarakhand State Council of Science & Technology, Dehradun, Uttarakhand | 2009 |
| Chaired "Nanotechnology" session | "S-Chemcon-08" Present and future trends in process industries | Department of Chemical Engineering NIT, Jalandhar and Institute of Chemical Engineers, Doaba Regional Centre | 2008 |
| Member | Projects Review Committee | Uttarakhand State Council of Science & Technology, Dehradun, Uttarakhand | 2008 |
| Jury Member Chemistry Section | 3rd Uttarakhand State Science & Technology Congress | Indian Institute of Technology, Roorkee | 2008 |
| Jury Member Chemistry Section | 2nd Uttarakhand State Science & Technology Congress | Kumaon University, Nainital, Uttarakhand | 2007 |
| Chaired "Industrial Waste Minimization and Resource Recovery" session | International Workshop on R & D Frontiers in Water and Waste water Management | National Environmental Engineering Research Institute (NEERI), Nagpur | 2006 |