Curriculum Vitae

Name : Dr. Inderjeet Tyagi

Designation : Scientist B (Chemist)

Father's Name : Shri. Umesh Tyagi

Date of Birth : 15th January 1990

Mailing Address :

Dr. Inderjeet Tyagi
Scientist B (Chemist)
Centre for DNA Taxonomy
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Academic Qualifications :

January 2014 – June 2016
- Ph.D. in Chemistry Department of Chemistry, IIT ROORKEE, India.

Ph. D. thesis title
- Development of Novel adsorbents for removal of noxious impurities from wastewater

July 2011- August 2013
- M.Sc. Chemistry (Commercial Methods of Chemical Analysis), Gurukul Kangri Visvavidyalaya, Hardwar, First class **(78.8%)**

June 2008- June 2011
- B.Sc. Chemistry, Mahatma Jyotiba Phule Rohilkhand University, Bareilly First Class **(69.3%)**

April 2006-May 2007
- 12th Kendriya Vidyalaya, Moradabad, Central Board of Secondary Education, Delhi, First Class **(75.8 %)**

April 2004-May 2005
- 10th Kendriya Vidyalaya, Moradabad Central Board of Secondary Education, Delhi, First Class **(75.4 %)**

Employment Record :
- ***Scientist B (Chemist), Zoological Survey of India, (Ministry of Environement, Forest and Climate Change)***
- ***Research Associate, Multinational Project BRICS (Colloborating Countries China and Russia) DST Project (05/01/2018-30/09/2018)***
- ***Program Officer, CBRI-ENVIS Project, CSIR-Central Building Research Institute, Roorkee (07/04/2017 - 30/09/2017)***
- ***Project fellow (JRF)*** in DST project Entitled "Development of Effective Adsorbents from Waste Rubber Tire for Wastewater Treatment." at IIT Roorkee

Awards and Fellowships

- ***Senior Research Fellow*** under Ministry of Human Resource and Development (MHRD) at IIT ROORKEE
- ***Junior Research fellow*** under Ministry of Human Resource and Development (MHRD) at IIT ROORKEE **(04/09/2015-09/01/2016)**
- ***Junior Research fellow*** in Department of Science and Technology (DST) Project Government of India, New Delhi. **(01/11/2013-30/08/2015)**
- **Qualified CSIR-NET-LS All India Rank 33**

Field of Research

- ***Wastewater Treatment***
- ***Adsorption***
- ***Environmental DNA***
- ***Metasystematics studies***
- ***Environmental Engineering***
- ***Building Materials***

Google Scholar

- ***Citations : 1971***
- ***h-index : 18***
- ***i10-index : 25***

(as on Nov., 2019)

Patent:

1. An Improved Process for the Preparation of Silica Nanoparticles for Applications in Cement Based Materials (**Application No. 0157NF2018**)
   Inventor: L.P. Singh, S. Naik B, U. Sharma, D. Ali, **Inderjeet Tyagi**

Projects Associated: 04

1. **Development of nano-engineered concrete for Sustainable Infrastructures:** I am working as ***Research Associate*** in this project. It is a ***Multinational DST BRICS project with China and Russia*** as Collaborating countries. As part of project activity, we had synthesized the low-cost silica nanoparticles (SNPs) using an improved, cost-effective and facile process. The prepared SNPs is then used as admixture in cement based materials and effective parameters like engineering and durability properties were evaluated and investigated.

2. **CBRI-ENVIS Centre on Flyash:** I worked as ***Program Officer*** in this project. It is a ***MoEF& CC*** funded project in CSIR-Central Building Research Insititute, Roorkee. As a part of project activity our main work is to collect, collate and disemminate the information of flyash through website, news letters, articles, day to day activities, Scientist-Student workshop etc. The project is of national importance and almost each and every information is gathered and collected under the single platform i.e. CBRI-ENVIS.

3. **Modification, Characterization and application of naturally occurring biomaterials for the removal of toxic contaminants from industrial wastewater:** I am associated as ***team member*** with this project. It is bilateral DST project with ***India and South Africa as collaborating countries***. As a part of project activity, we had synthesized several novel adsorbents from biomaterials with excellent adsorption properties. The

synthesized adsorbents are effectively used for the removal of noxious impurities including dyes and metal ions from wastewater.

4. **Development of effective adsorbents from waste rubber tire for wastewater treatment:** I worked as ***Junior Research fellow*** in this project. It is a project of national importance in the field of wastewater treatment which is funded by **DST, New Delhi**. As a part of project activity we had developed an activated and efficient adsorbent from waste rubber tire and successfully applied them for the remediation of noxious inorganic and organic impurities from wastewater.

Research Papers/Reviews: 25 Papers in International Peer Reviewed Journals with high Impact Factors.

Selected Publications:

1. V.K. Gupta, A. Nayak, S. Agarwal, **I. Tyagi**, Potential of activated carbon from Waste Rubber Tire for the adsorption of phenolics: Effect of pretreatment conditions, **Journal of Colloids and Interface Science,** 417 (2014) 420-430. **(Impact factor: 5.09) (One of the Most Cited Article in the list of Journal of Colloid and Interface Science)**
2. V.K. Gupta, Suhas, A. Nayak, S. Agarwal, M. Chaudhary, **I. Tyagi**, Removal of Ni (II) ions from water using scarp tire, **Journal of Molecular Liquids,** 190, (2014) 215-222. **(Impact factor: 4.51)**
3. M.S. Karmacharya, V.K. Gupta, **I. Tyagi**, S. Agarwal, V.K. Jha, Removal of As (III) and As (V) using rubber tire derived activated carbon modified with alumina composite, **Journal of Molecular Liquids,** 216 (2016) 836-844. **(Impact factor: 4.51)**
4. F. Nekouei, S. Nekouei, **I. Tyagi**, V.K. Gupta, Kinetic, thermodynamic and isotherm studies for acid blue 129 removal from liquids using copper oxide nanoparticle-modified activated carbon as a novel adsorbent, **Journal of Molecular Liquids**, 201, (2015), 124-133.**(Impact factor: 4.51) (One of the Most Cited Article in the list of Journal of Molecular Liquids)**
5. V. K. Gupta, **I. Tyagi**, S. Agarwal, H. Sadegh, R. Shahryari-ghoshekandi, M.Yari, O.Yousefi-nejat, Experimental study of surfaces of hydrogel polymers HEMA, HEMA-EEMA-MA, and PVA as adsorbent for removal of azo dyes from liquid phase **Journal of Molecular Liquids,** 206 (2015) 129–136. **(Impact factor: 4.51)**
6. L.P. Singh, D. Ali, **I. Tyagi**, U. Sharma, R. Singh, P. Hou, Durability studies of nano-engineered fly ash concrete, **Construction and Building Materials**, 194, (2019), 205-215.
7. D. Pathania, C. Verma, P. Negi, **I. Tyagi**, M. Asif, N.S. Kumar, E.H. Al-Ghurabi, S. Agarwal, V.K. Gupta, Novel nanohydrogel based on itaconic acid grafted tragacanth gum

for controlled release of ampicillin, Carbohydrate polymers 196, (2018), 262-271. **(Impact factor: 5.15)**

8. S. Agarwal, **I. Tyagi**, V.K. Gupta, M. Sohrabi, S. Mohammadi, A.N. Golikand, A. Fakhri, Iron doped SnO_2/Co_3O_4 nanocomposites synthesized by sol-gel and precipitation method for metronidazole antibiotic degradation, **Materials Science and Engineering C**,70 (2017) 178–183. **(Impact factor: 5.08)**
9. V.K. Gupta, S. Agarwal, **I. Tyagi**, M. Sohrabi, A. Fakhri, S. Rashidi, N. Sadeghi, Microwave-assisted hydrothermal synthesis and adsorption properties of carbon nanofibers for methamphetamine removal from aqueous solution using a response surface methodology, **Journal of Industrial and Engineering Chemistry,** 41, (2016), 158-164. **(Impact factor: 4.84)**
10. S. Agarwal, **I. Tyagi**, V.K. Gupta, N. Ghasemi, M. Shahivand, M. Ghasemi, Kinetics, equilibrium studies and thermodynamics of methylene blue adsorption on *Ephedra strobilacea* saw dust and modified using phosphoric acid and zinc chloride, **Journal of Molecular Liquids** 218, (2016) 208-218. (**Impact factor: 4.51**)
11. M. Verma, **I. Tyagi**, V.K. Gupta, R. Chandra, Adsorptive removal of Pb (II) ions from aqueous solution using CuO nanoparticles synthesized by sputtering method, **Journal of Molecular Liquids** 225 (2017),936-944. **(Impact factor: 4.51)**
12. V.K. Gupta, R. Chandra, **I. Tyagi**, M. Verma, Removal of hexavalent chromium ions using CuO nanoparticles for water purification applications, **Journal of Colloid and Interface Science,** 478, (2016), 54–62 **(Impact factor: 5.09)**
13. S. Kaur, S. Rani, V. Kumar, R.K. Mahajan, M. Asif, **I. Tyagi**, V.K. Gupta, Synthesis, characterization and adsorptive application of ferrocene based mesoporous material for hazardous dye Congo red, **Journal of Industrial and Engineering Chemistry** 26, (2015), 234-242. **(Impact factor: 4.84)**
14. S. Agarwal, , N. Sadeghi, **I. Tyagi**, V.K. Gupta, A. Fakhri, Adsorption of toxic carbamate pesticide oxamyl from liquid phase by newly synthesized and characterized graphene quantum dots nanomaterials, **Journal of Colloid and Interface Science,** 478, 2016, 430–438 **(Impact factor: 5.09)**
15. V.K. Gupta, O. Moradi, **I. Tyagi**, S. Agarwal, H. Sadegh, R. Shahryari-Ghoshekandi, A.S.H. Makhlouf, M. Goodarzi, A. Garshasbi, Study on the removal of heavy metal ions from industry waste by carbon nanotubes: Effect of the surface modification: a review, **Critical Reviews in Environmental Science and Technology** 46, (2016) 93-118. **(Impact factor: 7.68)**

16. F. Zare, M. Ghaedi, A. Daneshfar, S. Agarwal, **I. Tyagi**, T.A. Saleh, V.K. Gupta, Efficient removal of radioactive uranium from solvent phase using AgOH-MWCNTs nanoparticles: Kinetic and thermodynamic study, Chemical Engineering Journal 273, (2015), 296-306. **(Impact factor: 6.73)**
17. A. Asfaram, M. Ghaedi, S. Agarwal, **I. Tyagi**, V.K. Gupta, Adsorption of basic dye Auramine-O by ZnS: Cu nanoparticles loaded on activated carbon using response surface methodology with central composite design, **RSC Adv.**, **5** (2015) 18438 - 18450. **(Impact factor: 2.93)**
18. A. Fakhri, S. Behrouz, M. Asif, **I. Tyagi**, S. Agarwal, V. K. Gupta, Synthesis, structural and morphological characteristics of NiO nanoparticles co-doped with boron and nitrogen **Journal of Molecular Liquids,** 213(2016)326-331. **(Impact factor: 4.51)**
19. A. Fakhri, S. Behrouz, **I. Tyagi**, S. Agarwal, V.K. Gupta, Synthesis and characterization of ZrO_2 and carbon-doped ZrO_2 nanoparticles for photocatalytic application, **Journal of Molecular Liquids** 216, (2016),342-346. **(Impact factor: 4.51)**
20. S. Agarwal, **I. Tyagi**, V.K. Gupta, M.H. Dehghani, J. Jaafari, D. Balarak, M. Asif, Rapid removal of noxious nickel II using novel gamma alumina nanoparticles and multiwalled carbon nanotubes Kinetic and isotherm studies, **Journal of Molecular Liquids,** 224, (2016) 618-623**(Impact factor: 4.51)**
21. S. Nekouei, F. Nekouei, **I. Tyagi**, S. Agarwal, V.K. Gupta, Mixed cloud point/solid phase extraction of lead (II) and cadmium (II) in water samples using modified-ZnO nanopowders, **Process Safety and Environmental Protection,** 99, (2016), 175-185. **(Impact factor: 3.44)**
22. F. Nekouei, H. Kargarzadeh, S. Nekouei, **I. Tyagi,** S. Agarwal, VK Gupta, Preparation of Nickel hydroxide nanoplates modified activated carbon for Malachite Green removal from solutions: Kinetic, thermodynamic, isotherm and antibacterial studies, **Process Safety and Environmental Protection,** 102, (2016) 85-97. **(Impact factor: 3.44)**
23. M. Ghaedi, M. reza Rahimi, A.M. Ghaedi, **I. Tyagi**, S. Agarwal, V.K. Gupta Application of least squares support vector regression and linear multiple regression for modeling removal of methyl orange onto tin oxide nanoparticles loaded on activated carbon and activated carbon prepared from Pistacia atlantica wood, **Journal of Colloid and Interface Science,** 461, (2016) 425-434. **(Impact factor: 5.09)**

24. M. Ghaedi, S. Hajjati, Z. Mahmudi, **I. Tyagi**, S. Agarwal, A. Maity, V.K. Gupta, Modeling of competitive ultrasonic assisted removal of the dyes–Methylene blue and Safranin-O using Fe_3O_4 nanoparticles, **Chemical Engineering Journal** 268,(2015) 28-37. **(Impact factor: 6.73)**
25. S. Agarwal, **I. Tyagi**, V.K. Gupta, M.H. Dehghani, R. Ghanbari, Investigating the residual aluminum elimination from conventional and enhanced coagulation by phosphate compounds in wastewater treatment process, **Journal of Molecular Liquids** 221, (2016) 673-684 (**Impact factor: 4.51**)

Achievements:

- Outstanding Reviewer in **Journal of Cleaner Production**, Elsevier (I.F. =5.65)
- Outstanding Reviewer in **Journal of CO_2 Utilization,** Elsevier (I.F.= 5.50)
- Outstanding Reviewer in **Materials Chemistry and Physics**, Elsevier (I.F.= 2.21)
- Reviewer in **Carbon**, Elsevier (I.F. =7.08)
- Reviewer in **Journal of Colloid and Interface Science** (I.F. = 5.09)
- Reviewer in **Journal of Molecular Liquids**, Elsevier (I.F.= 4.51)
- Reviewer in **Journal of Industrial and Engineering Chemistry**, Elsevier (I.F. =4.84)
- Reviewer in **Chemosphere** Journal, Elsevier, (I.F.=4.42)
- Reviewer in **Colloids and Surfaces A: Physicochemical and Engineering Aspects**, Elsevier, (I.F.=2.71)
- Reviewer in **Journal of Bioscience and Bioengineering**, Elsevier (I.F.=2.24)
- Reviewer in **International Journal of Environmental Science and Technology**, Springer (I.F.= 2.03)
- Reviewer in **Environmental Science and Pollution Research**, Springer (I.F.= 2.80)
- Reviewer in **International Journal of Hydrogen Energy**, Elsevier (I.F.= 3.58)
- Reviewer in **Chinese chemical letters**, Elsevier (I.F.=1.58)
- Reviewer in **Resource-Efficient Technologies**, Elsevier
- Reviewer in **Nano-structures and Nano-objects**, Elsevier