

## Curriculum Vitae

- **Name** :Ratan Kumar Dey
- **Date of Birth** :02 June, 1968
- **Contact Address** :R. K. Dey, Reader in Chemistry  
Department of Chemistry, Ravenshaw University,  
Cuttack – 753 003, Orissa, India.  
E. mail: [rkdey@rediffmail.com](mailto:rkdey@rediffmail.com)  
Phone: +91-94394-85624
- **Nationality** :Indian
- **Marital Status** : Married
- **Academic qualification** : M.Sc. (Chemistry), Ph.D (Chemistry)
- **Areas of Research Interest/expertise** : Adsorption, Polymer (Synthesis and applications of ion-exchange and chelating Polymers for toxic metal removal, Biomedical Polymers), Development of biodegradable polymeric materials.

### **Academic Profile:**

- **Ph.D.:** Chelating resins derived from phenolic Schiff bases of diamines and hydroxyacetophenone- characterization and capacity studies.
- **Post-Doc:** Development of non-thrombogenic polymeric materials. (at Centre for Biomedical Engineering, IIT, Delhi)
- **Post-Doc:** Development of nano-materials / mesoporous materials of silica precursors. (TWAS Fellow in Brazil).
- **Awards:**
  - (i) Selected for Best Research Paper Awards in 1997 and 1998 by Orissa Chemical Society (OCS), Orissa, India.
  - (ii) Selected for Indian National Science Academy (INSA) visiting Fellow (2007) at Centre for Biomedical Engineering, Indian Institute of Technology, Delhi, INDIA for

initiating research in the development in synthesis of biodegradable polymeric material.

- **TOTAL NUMBER OF YEARS OF EXPERIENCES IN TEACHING/RESEARCH/INDUSTRY:** 19 (Active Teaching and research in regular cadre: 10 years, Industry:10 years)

- **Scientific Project (completed):**

1. Principal investigator of the project entitled “Extraction of metal ions using chemically modified silica gel”,  
Funding agency: University Grants Commission (UGC), New Delhi, India,  
Project number: F-12-32/ 04.
2. Synthesis and evaluation of polymeric adsorbents for the removal of fluoride:  
Major Research Project of University Grants Commission, New Delhi. (F.33-292/2007).

- **Scientific Projects currently in operation:**

1. Development of new shellac based biomedical polymer for controlled release application, Funding agency: Dept of Science and Technology, New Delhi (year of grant: 2010).

- **Number of Ph.D. thesis awarded: 01**

- **Number of Ph.D. thesis submitted for the award: 02**

- **Number of Ph.D. scholar currently under guidance: 02**

- **Number of M.Tech (Environmental Sci & Engg.) scholar guided: 01 (Awarded)**

- **Number of M.Sc. Students under guidance for project work: 06**

- **Publications in popular science journal:**

1. Scientific Writing on Stefan Hawkins and Black Hole in Regional Oriya Science Journal “Bigyanalok”, June (2000).
2. Scientific Writing on Polymer in Regional Oriya Science Journal, Bigyanalok, March, (2001).

3. Scientific Writing on Liquid Crystal in Regional Oriya Science Journal, Bigyanalok, (2001).

- **Membership of professional organizations:**

1. Life member, LM292/96, Orissa Chemical Society, Orissa.
2. Life member, 519/95, ISRTC, Utkal University, Orissa.
3. Life member, 561/97, Orissa Bigyan Academy, Orissa.
4. Life member, LF/1028, Indian Council of Chemists, Agra, India

- **Trainings / Conferences/ Invited speaker:**

1. Advanced Certificate Course in Instrumental and Chemical Analysis, S.P. College, Pune, (May, 1996).
2. Advanced Certificate Course in Instrumental and Chemical Analysis, S. P. College, Pune, (May, 1997).
3. Frontier in Material Science and Technology (FMST – 02), IIT, Kharagpur, (February, 2002).
4. IUPAC-PC-2002, Kyoto, Japan, (December, 2002).
5. UGC refresher course in Modern Trends in Chemistry, Academic Staff College (ASC), Jadavpur University, Kolkata, (January, 2004).
6. International conference on Polymers and Organic Chemistry, 2004 (POC'04), Prague, Czech Republic, (July 22 – 27, 2004)
7. Invited speaker in the “workshop on modern instrumental methods of drug and chemical analysis” (January, 2005), at Department of Pharmaceutical Science, BIT, Mesra, Ranchi (INDIA)
8. Oral presentation in “24<sup>th</sup> Annual conference of Indian Council of Chemists” during 24<sup>th</sup> annual conference of Indian council of chemists (Dec, 2005).
9. International conference in Coordination Chemistry, Fortaleza, Brasil, 2006.
10. International conference in nano and mesoporous materials, RRL, Bhubaneswar, 2008.

11. Invited speaker in “QIP programme” conducted by the Department of Pharmaceutical Sciences, BIT, Mesra. (2008).
12. Invited speaker in “QIP programme” conducted by the Department of Pharmaceutical Sciences, BIT, Mesra. (2009).
13. Selected to participate in 15 days workshop in “Experimental Chemistry”, conducted by School of Chemistry, University of Hyderabad, during July, 2009 (Sponsored by INSA, INASc, IISc, Bangalore).

**Published Research Papers in Peer-reviewed Journals in last five years (Yr. 2005 – 2010):**

1. Dey, Ratan Kumar, Ray, Alok R. (2005): Synthesis, characterization and blood compatibility of copolymers derived from polyamidoamines and vinyl acetate. **J. Macromolecular Science, Pure and Applied Chemistry**, 42, 351 – 364.
2. Dey R. K., Jha Usha, Singh, A. C., Samal, S., Ray, A. R. (2006): Extraction of metal ions using chemically modified silica gel covalently bonded with 4,4'-diaminodiphenylether and 4,4'-diaminodiphenylsulfone-salicylaldehyde Schiff bases. **Analytical Sciences**, 22(8), 1105 – 1110.
3. Dey R. K., Patnaik, T., Mohapatra, N., Samal, S. (2007): Removal of heavy metal ions using new chelating material containing N, O and S donor sites. **Separation Sci. Tech.** 42, 1 – 16.
4. Patnaik, T., Dey, R. K., Gauda, P. (2007): Isolation of triterpenoid glycoside from bark of *Terminalia arjuna* using chromatographic technique and investigation of pharmacological behavior upon frog muscle tissues. **E. J. Chemistry**, 4(4), 474 – 479.
5. Patnaik, T., Dey, R. K., Gauda, P. (2008): Antimicrobial activity of Friedelan-3 $\beta$ -ol and trans-N-caffeoyltyramine isolated from the root of *Vitis trifolia*. **Asian J. Chemistry**, 20(1), 417 – 421.
6. Dey, R. K., Airoidi, Claudio, (2008): Designed pendant chain covalently bonded to silica gel for cation removal, **J. Hazardous Materials**, 156, 95-101.
7. Pal Sagar, Sen G, Dey, R. K., Jha Usha (2008): Carboxymethyl tamarind synthesis, characterization and its application as novel drug delivery agent, **J. Applied Polymer Sci.**, 110, 392-400.

8. Dey, R. K., Oliveria F. J. E. V. Airoldi, Claudio (2008): Mesoporous silica functionalized with diethylenetriamine moiety for metal removal and thermodynamics of cation-basic centre interactions, **Colloid and Surfaces A: Physicochemical & Engineering Aspects**, 324, 41-46.
9. Dey, R. K., Jha Usha, Patnaik Tanushree, Singh A. C., Singh V. K. (2009): Removal of toxic/heavy metal ions using ion-imprinted aminofunctionalized silica gel, **Separation Sci. Technology**, 44, 1-22.
10. Swain, S. K., Islam, M., Patel, R. K., Jha, Usha, Dey, R. K. (2009): Removal of fluoride from aqueous solution using aluminum-impregnated chitosan biopolymer, **Separation Sci Technology**, 44 (2009) 2096-2116.
11. R. K. Dey, Andrea S. Oliveira, Tanushree Patnaik, V. K. Singh, D. Tiwary, Claudio Airoldi (2009) Grafting of Organosilane Derived from 3-glycidoxypropyltrimethoxysilane and Thiourea onto Magnesium Phyllosilicate by Sol-Gel Process and Investigation of Metal Adsorption Properties, **J. Solid State Chemistry**, 182 (2009) 2010-2017.
12. R. K. Dey, Tanushree Patnaik, Varun Kumar Singh, Claudio Airoldi, Synthesis of silica supported polyamidoamine for copper adsorption. (2009) **Applied Surface Science**, 255 (2009) 8176 – 8182.
13. S. K. Swain, Tapaswini Padhi, Tanushree Patnaik, R. K. Patel, Usha Jha, R. K. Dey, Kinetics and thermodynamics of fluoride removal using cerium-impregnated chitosan, **Desalination**, 13 (2010) 369-381.
14. G. S. Tiwary, Tanushree Patnaik, Sagar Pal, Usha Jha, R. K. Dey, (2010) Synthesis of new polysaccharide based biomaterial for controlled release applications, **Polymer Bulletin (in Press uncorrected proof)** DOI 10.1007/s00289-010-0294-x