

CURRICULUM VITAE OF

Dr. R.K.Soni

Reader & Head,
Department of Chemistry
Ch. Charan Singh University, Meerut

PERSONAL DETAILS

Father's Name: Late Shri G. C. Soni
D.O.B.: 31.12.1965
Marital Status: Married
Nationality Indian
Address: B-9, University campus, Meerut
Phone: 0121-2950709

EDUCATIONAL QUALIFICATIONS

- M.Sc (Chemistry) from University of Delhi.
- Master of Engineering (M.E.) degree in Polymer Technology from University of Delhi with DISTINCTION.
- Ph.D. (Technology) was awarded from Delhi University.

RESEARCH, ADMINISTRATIVE & TEACHING EXPERIENCE

- Held an officiating charge on the post of Registrar, Ch. Charan Singh University, Meerut from 1.11.2002 to 14.2.2003 and at present, working as Reader and Head, Department of Chemistry, Ch. Charan Singh University, Meerut and teaching post-graduate students and guiding Ph.D students for their research work.
- Worked on the post of Lecturer under Directorate of Training & Technical Education, Govt. of Delhi from 19.8.98 to 22.9.02. Ph. D students were awarded degree by University of Delhi, Delhi
- Worked as Senior Scientific Officer-I and Senior Scientific Officer-II in Delhi College of Engineering from 22.4.93 to 18.8.98 taught Master of

Engineering students. Excellent research work performed and Ph.D students were guided to perform their research work.

- Performed an excellent research work from 22.8.88 to 21.4.93 during the period of obtaining M.E degree and while performing the duties of Junior Research Fellowship and Senior Research Fellowship awarded by Council of Scientific and Industrial Research, New Delhi at Delhi College of Engineering. During the tenure of the work, taught B.E. and M.E. students.

RESEARCH PAPERS PRESENTED /ACCEPTED /COMMUNICATED FOR PUBLICATION

Excellent research work carried out during the tenure of different posts mentioned above was published in the International/ National journals. Some of the research papers were presented in National/ International conferences as per following detail:

1. **Synthesis & Characterisation of Terephthalamides from Polyethylene Terephthalate (PET) waste** *J. Appl. Polymer Sc.*, 96 (2005) 1515-1523.
2. **Estimation of thermodynamics properties and P-H diagrams for NARM of Propane and Isobutane** *Bull Pure & Appl. Sc.*, 23C(1) (2004) 65-86.
3. **Antifungal effect of the flower extract of *Ageratum Conyzoides* L against *Aspergillus Niger* Van Tiegham** *Bull Pure & Appl. Sc.*, Vol 23B(1) (2004) 11-14.
4. **Scanning Electron Microscopic study of PET waste flakes during aminolysis and ammonolysis** *Asian Chem. Lett.*, 12 (2008) in press.
5. **Vibrational Spectra and thermodynamics of Biomolecules: 5 Chlorocytosine** *Indian J. Pure and Appl. Phys*, 44 (2006) 653-660.
6. **Extraction efficiency & degradation of chlorophyll a & chlorophyll b in various**
7. **Studies on reduction of Terephthalamide and characterisation of p-Xylene diamine by FTIR in the proceedings of ICOPVS-2006, held at Dept. of Chemistry, C.C.S. University, Meerut**

8. FTIR studies of ammonolysed PET waste in the proceedings of ICOPVS-2006, held at Dept. of Chemistry, C.C.S. University, Meerut
9. FTIR and FT-Raman spectra and thermodynamics of 2,6-difluorobenzonitrile proceed in International Conference on Spectrophysics, 2005, held at Chennai.
10. Studies on the preparation of Polyester Plasticizers for PVC from PET waste: presented at 5 Asia Pacific Conference on Waste Management (APCRP), Kuala Lumpur, Malaysia, 2004.
11. Studies on Kinetics of thermally initiated radical polymerization of Divinyl ester monomers, *Polymer International* 38(1995) 147-152.
12. Recent Development in Thermally curable and Photo-curable Systems. *Prog. in Polymer Science*, 19 (1994) 137-169.
13. Studies on Kinetics of Radical Initiated Photo-co-polymerization of Divinyl (2-hydroxy propanoate). Ether of bisphenol-A and monomers: *Polymer International*, 31(1993) 305-314
14. Studies on Kinetics of Bulk Polymerization of Divinyl Ester by Radical Initiated Thermal and PhotoPolymerisation: *Polymer International*, 31 (1993) 239-245.
15. Studies on the Kinetics of Photo initiated Radical Polymerization of modified Epoxy Resin *Polymer International*, 29(1992) 185-190.
16. Higher Technical and Managerial Education needs of Polymer Industries in India, *J. National Foundation of Indian Engineers*, 10(b) (1996) 2-6.
17. Studies on Thermal behaviour of Rubber Toughened Bismaleimide Resins: Presented in Eighth National Seminar of Indian Thermal Analysis Society held on 17 - 21 Dec 1990 organized at Bhubhneswar (India).
18. Studies on Jute Fibre Reinforced Composites: Proceedings International Conference on Jute fibers composites and materials Dec 1-2 1994 New Delhi.
19. Recycling and Reuse of PET Waste: *Plastic Industry*, Vol. XXII, and No 4 March 1995.
20. Present Scenario of Plastic Resin in National and International

Market: Sovereign of Federation of Delhi Small Scale Industries Organization 1995.

- 21. Polymers used in Cable Manufacturing Plastic Industry.**
- 22. Design of a New Type of Biogas Plant using Plastic Material, Plastic Industry Vol. XXIV No. 11-12, Nov 1996**
- 23. Studies on decomposition Kinetics of Copolymers of Modified Epoxy-acrylate monomers: Accepted for Publication in Polymer International.**
- 24. Stabilization of Polyurethane films against thermal and photo-oxidative degradation 39,(1993) 93-101**

TECHNOLOGY DEVELOPED

The following industrial important technology have been developed:

- 1. Jute Fiber Composites**
- 2. Thermoplastic Elastomers For Footwear Application**
- 3. Rigid Polyurethane Foams for Insulation/Structural**
- 4. Thermoplastic Elastomers for Insulation**
- 5. Impact Modified PVC**
- 6. Easily Conducting Polymers**
- 7. Manufacturing of Unsaturated Polyester Resin from PET waste Binders for Construction**
- 8. Development of Special Grade Polyester Resins**
- 9. Development of Formulation of Special Grade PVC & Blends**
- 10. Development of Special Grade Epoxy Resins**
- 11. Development of Safety & Bullet Proof Glass**
- 12. Development of Thermoplastic Elastomers By Blending Natural Rubber & Polypropylene Polymers.**
- 13. Recycling of Methylacrylate Monomer Regenerated from (Methyl Methacrylate) Waste.**

RESEARCH PROJECTS COMPLETED SUCCESSFULLY FUNDED BY MIN. OF HRD

- Development of Special Grade Polyester Resin for M/S Apex Industries Ltd.
- Development of High Temperature & High Impact Resistant Formulations for Composites.
- Development of PVC formulations for various applications for M/S RK. Plastics Pvt. Ltd.
- Development of special grade epoxy resins for M/s Ravex Plasticizer Pvt.

RESEARCH PROJECTS

- Presently working on project entitled Recycling & Reuse of PET waste funded by UGC.
- Project entitled “Development of consumable biodegradable products” submitted to DST.

PATENT

- Application for obtaining patent for technology for Recycling and Reuse of PET waste accepted by TIFAC, Ministry of science & Technology, New Delhi .
- Application for obtaining patent for technology of novel organic thermal stabilizer for PVC accepted by TIFAC, Ministry of Science & Technology, New Delhi.
- Application for obtaining patent for technology of low cost plasticizer accepted by TIFAC, Ministry of Science & Technology, New Delhi.
- Application for obtaining patent for technology of Sunlight cured high performance composites filed to TIFAC, Ministry of Science & Technology, New Delhi

RESEARCH INSTRUMENTS FAMILIAR WITH

During my tenure of research work I have extensively worked on the following most modern analytical instruments.

- ❑ **Differential Scanning Calorimetry**
- ❑ **Differential Photocalorimetry**
- ❑ **Dynamic Mechanical analyzer**
- ❑ **Universal Tensile Testing Machine**
- ❑ **I.R. Spectrophotometer**
- ❑ **U.V spectrophotometer**
- ❑ **Rheometer**
- ❑ **Double beam spectrophotometer**
- ❑ **Mooney Viscometer**
- ❑ **Polarograph**
- ❑ **Rotoviscometer**
- ❑ **Laser Light Scattering Photometer.**
- ❑ **Rheocord**
- ❑ **H.P.L.C**
- ❑ **Elemental Analyzer**
- ❑ **Raman Spectroscopy**
- ❑ **Flame Photometer**
- ❑ **Izod/ Charpy**
- ❑ **Bomb Calorimeter**

PROCESS INSTRUMENTS FAMILIAR WITH

Well conversant with following processing equipments:

- ❑ **Extruder**
- ❑ **Injection Moulding Machine**
- ❑ **Compression Moulding**
- ❑ **Blow Moulding**
- ❑ **Internal Mixers**

LIST OF RESEARCH SCHOLARS WHO HAVE BEEN AWARDED Ph.D DEGREE

S.No	Name of the Student	Title of Research Project
1	N.Padma Vinojah	Synthesis and characterization of thermally stable poly (ester-imides)
2	Vandana Sachdeva	Studies on thermoplastic Elastomers
3	Monica Sharma	Studies on re-use and recycling of plastic wastes
4.	Vandana Yadav	Studies on Synthesis, characterization & Application of POLYMERIC Plasticizers from PET waste
5.	Swati Singh	Studies on Synthesis, characterization & Application of Phthalamides generated from PET waste
6.	Neetu Singh	Studies on Jute/Glass Fibre reinforced Composites
7.	Rohit Chaudhary	Studies on Synthesis, Characterization & Application of Thermally stable Polymers
8.	Pradeep Tomar	Extraction of useful chemicals from obnoxious weeds
THESIS SUBMITTED		
9.	Vinod Kumar	Studies on Synthesis, Characterization & Application of Biopolymers
10.	Shweta Soam	Conversion of Cellulosic waste into Biodegradable plastics

LIST OF RESEARCH SCHOLARS WHO HAVE BEEN REGISTERED FOR Ph.D DEGREE

S.No	Name of the Student	Title of Research Project
1.	Anuj Jain	Studies on degradation of PET waste with ammonia & amines in presence of catalyst
2.	Vaishali Poonia	Studies on extraction methods & degradation kinetics of Chlorophyll in some plant species

3.	Meenu Teotia	Development of radiation Curable Formulations for Laminated Glasses
4.	Priyanka Arora	Effect of nano-particles on UV- curable adhesives
5.	Richa Singh	A Study on variation of Adenosine deaminase, Vit. E, Glycoproteins, Lipid Peroxidation and Antioxidants enzymes in patients suffering with Pulmonary Tuberculosis.
6.	Krishna Dutt	Studies on the Physico-Chemical Properties & Compatibility of Polymeric Plasticizer with PVC & Rubber Compound.
7.	Manisha Bhardwaj	Studies on Anti-microbial activity on various aromatic Amides.

LIST OF M.E. (POLYMER TECHNOLOGY) STUDENTS WHO HAVE BEEN AWARDED. M.E. DEGREE UNDER THE SUPERVISION OF UNDERSIGNED

S.No	Name of the student	Title of Research Project	Year of completion
1	Mr. Tarun Deep	Studies on Mechanical & Dielectric Properties of Modified Epoxy and Acrylate Copolymers	1991
2	Mr. Vikrant Bisht	Studies on decomposition Kinetics of modified epoxy and acrylate co polymers	1991
3	Mr. Sanjeev Bansal M/s Polyplex	Studies of dry unsaturated Polyester resin composites	1994
4	Mr. Ali Masahi Delhi College of Engineering	Studies on jute fiber reinforced cerium oxide filled Unsaturated polyester resin Composites	1994
5	Ms. Monica Sharma Delhi college Of Engg.	Preparation and testing Of unsaturated Polyester resins from PET waste	1995
6	Sanjeet sarkar M/s S.R.F.	Development of thermoplastic Elastomers for shoe-sales.	1995

7	Sanjay Kumar Shahi M/s Ester Industries Ltd.	Development of epoxy unsaturated polyester hybrid Powder for molding application	1995
8	Ish Walia M/s Machiniplast	Effect of vinyl Monomer on Mechanical and electrical Properties of composites	1995
9	Rakesh Sethi M/s Wadco Schlegel	Development of Polymeric Polyester Plasticizer for Poly (vinyl chloride) from PET waste	1996
10	Priya Jain M/s Enchemco	Development of a new polymeric membrane for treatment of water effluents of textile industries.	1996

COURSE MATERIALS PREPARED

The following books written by the undersigned have been published by All India Council for Technical Education., New Delhi for the professionals working in the industries.

- **Manufacturing & handling of polyurethane foams**
- **Curing of epoxy resin.**
- **Modernization guide on unsaturated PR.**
- **Solventless insulation varnishes.**
- **Recent development in plastic tapes**
- **High temperature polymers**
- **Thermosetting plastic molding powder.**
- **Advances in adhesive technology.**

OTHER INFORMATION

Familiar with computer languages like **BASIC**, **FORTRAN** and on the highly specialized softwares of **Du Pont** (Isothermal, ASTM, TGA, & DPC Kinetics, DEA, DMA, analysis) **Haake Softwares** (Rot 22) Etc.

EXPERT/MEMBER

- Expert selection committee for various posts such as lecturer, technical assistant C.C.S University Meerut.
- Expert for the preparing & revision of the syllabus for M.Sc (Polymer Science & Chemical Technology).
- Expert for the selection of various posts of Delhi Subordinate Service Board.
- Convenor Research Degree Committee, Deptt. Of Chemistry, Ch. Charan Singh University, Meerut
- Convenor for Board of Studies, FOR m.Sc. Biochemistry, M.Sc. (PSCT), Ch. Charan Singh University, Meerut
- Member of Academic Council, Ch. Charan Singh University, Meerut.
- Member of Executive Council, Ch. Charan Singh University, Meerut.

REFERENCES

1. Prof. Ramesh Chandra, Ex-vice chancellor, C.C.S. University, Meerut
2. Prof. V.K.Rastogi, Physics Department, C.C. S. University, Meerut
3. Prof. Harish Chandra, Department of Chemistry, University of Delhi, Delhi
4. Prof. A. P. Gupta, Delhi College of Engg., Delhi

Place:

Date:

(R.K.Soni)