



Dr. Reena Singhal
Professor & HOD

B.sc., B.Tech. (Plastic Tech.) , M. Tech.(Plastic Tech.), Ph.D.(Plastic Tech.)
Department of Plastic Technology (Chemical Technology)
Harcourt Butler Technological
Institute, Kanpur – 208002
India

Mobile: +919721456046
+919450333750

E-mail: reenasinghal123@gmail.com; reena_singhal123@rediffmail.com

PERSONAL DETAILS

Date of birth :28.10.1963
Husband's name: Dr. Shalendra Kumar Singhal ;Maiden name: Reena Jain
Contact Address Residence: Type IV, Old Soda Factory , East Campus, HBTI (Behind Canteen);
Kanpur -208002

PROFILE, SKILLS AND VALUES

- Internationally acclaimed Researcher and distinguished academician ,Journal Editor and Reviewer, Examiner& Paper setter for reputed universities.
- Strong research traits with excellent ability to coordination with different people at one time under difficult situations and the ability to bring out the best in others while creating a healthy and friendly work environment, thus enhancing operational efficiency and optimizing resource utilization.
- Participated in National & International exhibitions and conferences for knowledge sharing and building, branding, research and partnership building.

Employment Details:

1)Presently serving as **Head ,Plastic Technology Deptt.since19.8.2014, and Professor in Plastic Technology Deptt. at H.B.T.I., Kanpur since 28.12.2006**

Present Salary : Rs.66,430 Basic + DA and other Allowances (Scale 37,400-67,000), Grade Pay Rs.10,000

- Teaching Experience** : 26 years, as follows:
- As Lecturer in Plastic Department H.B.T.I., Kanpur from April 7th 1989 to Dec. 1998
 - As Assistant Professor from 28th Dec. 1998 to 31st Dec. 2005
 - As Associate Professor from 1st Jan. 2006 to 27.12.2006
 - As Professor from 28.10.2006 to present date
 - Head ,Plastic Technology Deptt. Since 19.08.2014

Industrial Experience

2)Worked as Designer Trainee in ,”The Plastic Product Ltd.” From August 88 to March 1989

Educational Qualifications

Ph.D. (Chem. Tech.) Plastic Technology	1998	Title of the thesis, “Study of Physico-Chemical Factors for Controlled release of drugs from Polymeric matrices”. H.B.T.I., Kanpur University.
M. Tech. (Chem. Tech.) Plastic Technology	1988	H.B. Technological Institute, Kanpur, First Division with Honours (86.5%) First Position in the Branch.
B.Tech.(Chem.Tech.) Plastic Technology	1986	H.B. Technological Institute Kanpur, First Division with Honours (80.1%) Second Position in the Branch.
B.Sc.	1983	Kanpur University, Kanpur, First Division. (66.5%)
Intermediate	1981	U.P. Board, Allahabad, First Division (67.4%)
High School	1979	U.P. Board, Allahabad, First Division (68.6%)

Awards and Scholarships

- Awarded merit scholarship for the session 1984-86 at H.B. Technological Institute, Kanpur.
- GATE Scholarship Rs.1800/- p.m. during M. Tech. Session (1986-88) for 18 Months.
- Cash Prize from the Institution (H.B.T.I.) for standing first in the branch in M. Tech. (Chem. Tech.) Plastic Technology (1988).

Administrative Experience :

- Acting as Dean Research & Development since 15.10.2015
- Acted as Assistant Dean of Academics affairs since April 2010-Dec 2010.
- Acted as Assistant Dean of Planning and Resource generation Dec2010 – till March 2013.
- Acting as Warden, Girls Hostel HBTI Kanpur for last 20 years.
- Acting as Convener Department Purchase Committee
- Acting as Member in various Academic Committees of Institute such as Board of Studies, Academic Council, Accreditation Committee, and Selection Committee.
- Acted as member in Women Welfare Committee of GBTU.
- Acting as HOD, Plastic Technology since 19.08.2014.
- Acting as Expert Plastics and Rubber in U.P. Police Stores & Purchase Committee

Recognitions Related To Research Activities

Serving As Member Editorial Board Of International Journals

1. Appointed as **Journal Editor** for newly launched International Journal,” American Journal Of Macromolecular Science” Published by Columbia International Publishing.
2. Appointed as **Member Editorial Board** for following three newly launched International Journals published by,” **Journals Pub** “
 - (I) International Journal of Polymer Science & Engineering
 - (ii) International Journal of Green Chemistry
 - (iii) International Journal of Prevention & Control of Industrial Pollution

Reviewer for following reputed International Journals:

Acting as reviewer for following reputed International journals on regular basis for last one decade.

International :	Journal of Applied Polymer Science Journal of Macromolecular Sci.: Pure & Appl. Chemistry Biomacromolecule Polymer Bulletin Carbohydrate Polymer Material Chemistry & Physics Desalination & Water Treatment
------------------------	--

Brazilian Journal of Chemical Engineering
 Journal of Drug Delivery
 Journal of Polymer Research
 Chemical Engineering Journal
 Separation Science and Technology
 Bioresource Technology
 Polymer for Advanced Technologies
 Applied Clay Sciences
 Journal of Polymer Materials
 Chinese Chemical Letters
 Malaysian Polymer Journal
 e-Polymers
 European polymer Journal
 Industrial and Engineering Chemistry Research
 Desalination and water treatment
 Soft Materials
National : Indian Journal of Engineering and Materials
 Sciences

Authored Chapters in Upcoming Encyclopedia:

Following two Review chapters are written on *Invitation from editor* of this upcoming Encyclopedia in niche area of *Biomedical Polymers and Polymeric Biomaterials*

a) Books Published

(In book chapters)

S.N.	Authors	Title of the book	Publication details	publisher	Year of publication	ISBN no. & DOI
1.	Reena Singhal	Hydrogels, Multi-component Anionic :Swelling and Controlled Release	1 st Ed .;Mishra,M. ed.;Taylor & Francis,N.Y.,2015,Vol.6,p.3951-3969.	Taylor and Francis	April 2 ,2015	9781439898796 DOI:10.1081/E-EBPP-120049987
2.	Reena Singhal	Hydrogels: Mathematical Approaches	1 st Ed .;Mishra,M. ed.;Taylor & Francis,N.Y.,2015,Vol.6,p.3929-3950.	Taylor and Francis	April 2 ,2015	9781439898796 DOI:10.1081/E-EBPP-120049988

I) Session Chaired on "Nanocomposites" on 2.3.13 in International conference on Advancements in Polymeric Materials, organized by CIPET at Lucknow on 1-3 March 2013.

J) Co-author of "Course module on plastic processing extrusion" : One of the authors of "**Course module on plastic processing-Extrusion**" prepared for Continuing education programme under AICTE New Delhi (1997-98).

K) Research projects Completed : TWO

- I. by DMSRDE (D&DO) Kanpur on development of PEEK Liquid Crystalline Polymer (LCP) : An important defence project was sanctioned by DMSRDE (**DRDO**) Kanpur on Development of **Polyether Ether Ketone (PEEK) Liquid crystalline Polymer (LCP) Blends** sanctioned money 3.71 lacs. Completed on 31.10.2001. Capacity : Co-Investigator
- II. Research project sanctioned by **UGC** New Delhi on **Development of Copolymeric Hydrogels based adsorbents for removal of toxic heavy metal ions & dyes from industrial waste waters** sanctioned money 7.20 lacs; Duration from 1.2.2011 to 31.1.2014, Three years. Capacity: Principal Investigator.
- III. **Member of centre of excellence on lipids at HBTI, Kanpur project cost:400 lacs**

PUBLICATIONS AND RECOGNITIONS RELATED TO RESEARCH ACTIVITIES

A) RESEARCH STUDENTS(Ph.D) guided: TOTAL-SEVEN

Six Awarded (Annexure I)
One Submitted
One in progress

B) Total Research Papers Published : Total research papers =47+3+7+60=117

(Annexure II a & b).

I have 266 citations on Google Scholar out of any research work.

IIa) International referred peer reviewed journals- published **47** papers in peer reviewed reputed international journals & **3** in Proceedings(**TOTAL 50**). (Details as per Annexure II a).

IIb) 7 papers got published in **National journals** (Details as per Annexure II b).

C) Papers Presented –60 papers presented/published in proceedings of international and national conferences (Annexure III a + b) .

E) Invited lectures in Courses/CEP'/EDP'S/Workshops/Conferences:

- Delivered Invited Talk in Workshop, "Water Pollution and its Management" on topic , Solid regenerable superabsorbent polymeric hydrogels for removal of Heavy metal ions/dyes from industrial waste waters held at D.A.V.College,Kanpur on 31.10.2015.

- Delivered Invited talk on 2.3.13 in International *conference on Advancements in Polymeric Materials*, organized by CIPET at Lucknow on 1-3 March 2013
- Delivered Invited Talks in various TEQUIP-II Short term courses held at H.B.T.I. in 2013. Delivered Invited talk on 2.3.13 in International *conference on Advancements in Polymeric Materials*, organized by CIPET at Lucknow on 1-3 March 2013(Annexure III a).
- Delivered Lectures on "Processing of Rubbers under CEP-DRDO programs" held on " High Performance Polymeric Materials and Rubber Chemistry and Applications" held at DMSRDE, Kanpur. Delivered lectures on , "Advanced Characterization Techniques", and "Biomedical Applications of polymeric Hydrogels ", in TEQUIP Courses held at H.B.T.I., Kanpur
- Delivered Lectures at Directorate Technical Education, Indian Institute of Technology ,N.Delhi, STEP, Directorate of Industries, National Productivity Council ,Kanpur

F) Organization of Seminar: Organized a Two days National Seminar on "Recent Development of Polymers" **POLYCON-2002** on 16-17th Aug. 2002 as Convener.

G) Industry-Academic Interaction

- Engaged in consultancy / Testing coming to the Department for the Private Government Organisation /Industries etc. Developed Testing for Railway Signal Lens for DRDO
- Conducted EDP Short Term Training Program on House hold Adhesives under STEP as Course Coordinator

H) Examinership:

- Acted as examiner and paper setter for various universities like Jodhpur, Bundelkhand, Board of Technical Education, U.P., Kanpur Univ. and U.P. Tech Univ. etc.
- Acted as examiner for Ph.D. for Pune University, & Rani Durgawati Vishwavidyalaya, Jabalpur; and M.Tech for Delhi College of Engg. & B.Tech, C.I.P.E.T., Lucknow.

I) International Visits: Travelled to U.S.A. in 2004 & 2008 to attend International conferences. Travel grant was given by DST, AICTE & GBTU.

J) ENI International Award-2014 Invite: Recently based on my recent research, received Invite to participate by the Organizers for in category of **Protection of Environment** worth 200,000 Euro's offered by Italian Energy Company ENI, Rome.

PROFESSIONAL MEMBERSHIPS(LIFE MEMBER)

- The Society of Polymer Science.
- The Paint & Coating Tech. Association.
- The Electron Microscope Society of India.
- Oil Technologist Association of India
- Indian Plastic Institute
- Vignana Bharati
- Society for Microscope Science & Technology

Place:

(REENA SINGHAL)

Annexure - I

DETAILS OF Ph.D STUDENTS BEING GUIDED

S. No.	Name of Students	Topic	Stream & University	Status	Capacity
1.	Miss Tamanna Begum	"Synthesis & Characterization of Modified polyacrylamide based copolymeric hydrogels"	Applied Chemistry CSJM Univ. Kanpur	Thesis Awarded in 2003	Guide
2.	Mrs. Indu Gupta	"A study of Environment Responsive (Smart) Hydrogels based on Polyacryl-amide and Acrylates."	U.P. Technical University Lucknow	Thesis Awarded in 2008	Guide
3.	Mr. Rajiv Singh Tomar	Synthesis and Characterization of Super Absorbent polymers based on Acrylamide and Acrylic acid.	U.P. Technical University Lucknow	Thesis Awarded in 2008	Co-guide
4.	Mr. Bilson Shukla	Effect of Electrical Insulating. Mechanical and Thermal Properties of solventless Polyester Varnishes.	U.P. Technical University Lucknow	Thesis awarded in 2010.	Co-guide
5.	Miss Arundhati	"Studies on Thermomechanical properties of blends based on Polysulfide & Epoxy Resin"	U.P. Technical University Lucknow	Thesis in awarded In 2012	Co-Guide

6	Miss Seema Awasthi	“Synthesis and Characterization of Smart Hydrogels based on Acrylamide and Sodium Acrylate modified with Acrylic derivative”	U.P. Technical University Lucknow	Thesis in awarded In 2014	Guide
7.	Miss Tripti Singh	“Synthesis and Characterization of Multifunctional copolymeric Hydrogels”	U.P. Technical University Lucknow	Thesis submitted in April 2014	Guide
8.	Miss Shipra Agnihotri	“Synthesis and Characterization of Multicomponent Ionic Hydrogels based on Natural Carbohydrates for Water purification”	U.P. Technical University Lucknow	Registered in March 2013	Guide

LIST OF RESEARCH PAPERS PUBLISHED IN PEER REVIEWED REFERRED

INTERNATIONAL JOURNALS

Annexure- II a

LIST OF RESEARCH PAPERS PUBLISHED IN PEER REVIEWED REFERRED

INTERNATIONAL JOURNALS

Sl. No.	Title of the papers published	Name of the Journal/Book/Paper	Status of the journal & place of publication	Publication Details i.e. Volume, Issue, Year
1.	Mathematical modeling of swelling for Analyzing the effect of high and low nonionic monomer content for poly (AM-co-HEA-co-AA) hydrogels; Seem Awasthi, ReenaSinghal*	Journal of polymer material	International M.D.I. Publications, India	2016(Ink Press)
2.	Mathematical modeling for the prediction of the overall swelling profile from poly(AM-co-AA-co-HEA) hydrogels: effect of glycidyl methacrylate and ammonium per sulphate	International Journal of Plastics Technology, 1-22	International Springer ISSN: 0972-656X (Print) 0975-072X (Online)	DOI 10.1007/S12588-015-9124-1 Published online Dec 2015 pg no 1-22
3.	A Review: Tailor made Hydrogel Structures (Clamifications and Sythesis Parameters); Reena Singhal, Kshitij Gupta	Polymer Plastic and Technology and Engineering	International Taylor & Francis ISSN 0360-2559 (Print), 1525-6111 (Online) 17 Issues /yr	Published online in Aug,2015
4.	Methyl Orange Adsorption by Reuse of a Waste Adsorbent poly(AAc/AM/SH)-MB Superabsorbent Hydrogel: Matrix effects, Adsorption Thermodynamic and Kinetics Studies" Tripti Singh, Reena Singhal	Desalination and Water Treatment;	International Taylor & Francis ISSN 1944-3994 (Print), 1944-3986 (Online)	DOI:10.1080/19443994.2013.859098 Vol.53(7), 2015; feb.2015; pages 1942-1956 Citation:1
5.	Reuse of a Waste Adsorbent poly(AAc/AM/SH)-Cu Superabsorbent Hydrogel, for the Potential Phosphate	Journal of Applied Polymer Science	International Wiley Interscience Online ISSN: 1097-	Vol.129(6), 2013; 15 Sept.2013; 3126-3139

	ion Removal from Waste Water: Matrix Effects, Adsorption Kinetics, and Thermodynamic Studies. Tripti Singh, Reena Singhal*		4628	Citation:4
6.	Kinetics and thermodynamics of cationic dye adsorption onto dry and swollen hydrogels poly(acrylic acid-sodium acrylate-acrylamide) sodium humate	Desalination and Water Treatment	International Taylor & Francis ISSN 1944-3994 (Print), 1944-3986 (Online)	Vol.53(13), 2015; DOI: 10.1080/19443994.2013.871342; pages 3668-3680 Citation:1
7.	Regenerable Hydrogels Based on poly(acrylic acid-sodium acrylate-acrylamide) Modified by Sodium Humate for High Removal of Pb ²⁺ and Fe ²⁺ ions: Metal Adsorption Kinetics and Thermodynamic Studies Tripti Singh, Reena Singhal*	Desalination and Water Treatment	International Taylor & Francis ISSN 1944-3994 (Print), 1944-3986 (Online)	Vol.52(28-30), 2014; DOI: 10.1080/19443994.2013.808588;pages 5611-5628 Citation:1
8.	A study on interaction and solubility of acetaminophen with poly (AM-co-HEA-co-AA) hydrogels by DSC: Effect on drug diffusion behavior Seema Awasthi and Reena Singhal	Journal of Macromolecular Science, Part A: Pure and Applied Chemistry	International Taylor & Francis ISSN 1060-1325 (Print), 1520-5738 (Online) Publication Frequency 12 issues per year	Vol. 50; Issue I, January 2013, 72-89 Citation:1
9.	Poly (Acrylic acid / Acrylamide / Sodium Humate) superabsorbent hydrogels for metal ion/Dye adsorption: Effect of Sodium Humate concentration Tripti Singh and Reena Singhal	Journal of Applied Polymer Science	International Wiley Interscience Online ISSN: 1097-4628	Vol.125, 1267–1283 (2012) Citation:10
10.	A Mathematical Study on Effect of 2-Hydroxyl Ethyl Acrylate on Controlled Drug Diffusion from Smart Hydrogels Based on Poly(acrylamide-co-hydroxy ethyl acrylate -co-acrylic acid) Seema Awasthi, Reena Singhal	Journal of Macromolecular Science, Part A: Pure and Applied Chemistry	International Taylor & Francis ISSN 1060-1325 (Print), 1520-5738 (Online) Publication Frequency 12 issues per year	Vol. 49, No.5, 1–17, (2012) Citation:2
11.	Synthesis and Characterization of	Journal of	International	Vol.124:3,

	Novel Poly(acrylamide-co-acrylic acid-co-2-hydroxy ethyl actylate) Hydrogels: Mathematical Approach in nvestigation of Swelling Kinetics and Diffusion Models”	Applied Polymer Science	Wiley Interscience Online ISSN: 1097-4628	2348-2361 (2012) Citation:2
12	Study on Effect of Butyl methacrylate content on Swelling & Controlled Release Behaviour of Poly(Acrylamide-co-Butyl-methacrylate-co-Acrylic acid)Environment Responsive Hydrogels”; Reena Singhal, Indu Gupta	International Journal of Polymeric Materials	International Taylor & Francis	Vol. 59 :1–20, (2010) Citation:14
13	Effect of polysulfide modifier on mechanical and morphological properties of epoxy/ phthalic anhydride system; Arundhati Dubey, Reena Singhal & A.K.Nagpal	International Journal of Plastic Technology	International Springer ISSN: 0972-656X (Print) 0975-072X (Online)	Vol.13, n0.2,193-204, (2010) Citation:-
14	Influence of phenoxy modifier on mechanical, electrical and morphological properties of epoxy/DDS system Varun Dixit & Arun K. Nagpal & Reena Singhal,	International Journal of Plastic Technology	Springer International ISSN: 0972-656X (Print) 0975-072X (Online)	Vol.14, n0.1,38-52, (2010) Citation:-
15	Synthesis and Characterizations of Poly (Hydroxy Ether of Bisphenol-A) or Phenoxy Modified Epoxy Blends," Varun Dixit, Arun Kumar Nagpal, Reena Singhal	Malaysian Polymer Journal	International Malaysia	Vol.5, no.2, p69-83 2010 Citation:-
16	Thermal and chemical resistance behaviour of cured Epoxy based on Diglycidyl ether of Bisphenol A AND Thiol treated liquid Polysulfide blend	Advanced Polymer Letters	International VBRI PRESS	1(3), 238-245; 2010 Citation:2
17	Study on Controlled Drug Release Behaviour of Biodegradable Polymer Matrices based on Half Ester of Copolymer of Methyl vinyl ether and Maleic Anhydride,Reena Singhal,Anjali Mishra,A.K.Nagpal and G.N.Mathur	Journal of Polymeric Materials	International India ISSN: 0973-8622 e-ISSN: 0976-3449	Vol. 26, No. 3, 2009, 239-250. Citation:1
18	Effect of crosslinker and initiator	International	International	VOL. 13(1) 22-

	concentration on the swelling behaviour and network parameters of superabsorbent hydrogels based on acrylamide and acrylic acid”; Reena Singhal, Rajiv Singh Tomar, A.K. Nagpal	Journal of Plastic Technology	Springer ISSN: 0972-656X (Print) 0975-072X (Online)	27, 2009 Citation:8
19	Reactive Blends Of Epoxy resin (DGEBA) Crosslinkdby Anionically Polymerized Polycaprolactam :Adhsive Property and Chemical resistance;” Alka Gupta, S.K.Singhal, Suman katiyar, Reena singhal, A.K.Nagpal	Polymer Plastic and Technology and Engineering”	International Taylor & Francis ISSN 0360-2559 (Print), 1525-6111 (Online) 17 Issues /yr	Vol. 47 ,No.3, 223-21-14, 2008 Citation:12
20	Effect of Concentration of Methyl Ethyl Ketone Peroxide on Gelation Characterstics and shrinkage of solventless Polyester Varnish. Bilson Shukla, A.K.Nagpal, P.K.Singh, Reena Singhal and A.K.Nagpal	Journal of Oleo Science	International Japan Oil Chemists’ Society	Vol. 55 , 299-303, 2007 Citation:1
21	Synthesis and Characterization of solvent less Polyester Varnish based on DiCyclo Penta Diene (DCPD)””; Bilson Shukla ,Varun Dixit ,Reena Singhal and A.K.Nagpal .	Polymer Plastic and Technology and Engineering	International Taylor & Francis ISSN 0360-2559 (Print), 1525-6111 (Online) 17 Issues /yr	Vol. 46 : 191-198 , 2007 Citation:1
22	Synthesis of Poly(Acrylamide-CO-acrylic acid) based super absorbent hydrogels by gamma radiation: Study of Networks Parameters and Swelling behaviour,” Rajiv Singh Tomar, Indu Gupta,A. K. Nagpal & Reena Singhal	Polymer Plastic and Technology and Engineering	International Taylor & Francis ISSN 0360-2559 (Print), 1525-6111 (Online) 17 Issues /yr	Vol. 46 : 1-8, 2007 Citation:-
23	A study on effect of Acrylic Acid content on swelling Behaviour of Poly (AAM-CO,BMA-CO-AAC) hydrogels”.Indu Gupta, Rajiv Singh Tomar, A. K. Nagpal & Reena Singhal	Journal of Macromolecular Science :Part A,Pure Applied Chemistry,	International Taylor & Francis ISSN 1060-1325 (Print), 1520-5738 (Online) Publication Frequency 12 issues per year	Vol. 44 , No. 4,403-412, 2007 Citation:1

24	Synthesis of poly(acrylamide-co-acrylic acid)-based Super-absorbent hydrogels by gamma radiation: study of swelling behaviour and network parameters"; R. S. Tomar, I. Gupta, Reena Singhal and A. K. Nagpal	Designed Monomers and Polymers	International VSP an imprint of Brill	Vol.10 , No.1 , 49-66, (2007). Citation:9
25	Synthesis and Characterization of Poly (AAM-CO-BMA_CO-ACC) hydrogels: effect of acrylamide content on swelling behaviour." Indu Gupta, Rajiv Singh Tomar, A.K. Nagpal & Reena Singhal,	Designed Monomers and Polymers	International VSP an imprint of Brill	Vol. 9 , No. 6, 589-605, 2006 Citation:4
26	Synthesis of Poly (Acrylamide-LO-Methyl Metha Acrylate) Chemically Crosslinked hydrogel and their application in controlled release of model drugs".T. Begum, A. K. Nagpal & Reena Singhal	Designed Monomers and Polymers	International VSP an imprint of Brill	Vol. 9 , No.5,477-490, 2006 Citation:-
27	Effect of concentration of Methyl Ethyl Ketone Peroxide on Gelation characteristics and Shrinkage of Solvent less Polyester Varnish". B. Shukla, A. K. Shukla, P. K. Singh, R. Singhal & A. K. Nagpal	Journal of Oleo Science,	International Japan Oil Chemists' Society	Vol-55 , No.6, 299-303, 2006. Citation:1
28	Reactive Blends of Epoxy Resin (DGEBA) Crosslinked by Anionically Polymerized Polycaprolactam : Part - II (Mechanical and Electrical Properties)". A. Gupta, R. Singhal and A.K. Nagpal.	The Journal of Applied Polymer Science	International Wiley Interscience Online ISSN: 1097-4628	Vol. 96 , Issue 2, 537-549, April 2005 Citation:-
29	Dimensional Stability and Fungal Decay of Rubber Wood-Polymer Composites. Processed by Gamma Radiation". S.K. Gupta, N.K. Gupta, R. Singhal and A.K. Nagpal	Indian Journal of Chemical Technology ,	International NISCAIR, India	Vol.11 , 243-244, March 2004 Citation:2
30	A study on Copolymeric Smart Hydrogels based on Acrylamide - Methyl Methacrylate and its modified vinyl amine containing Derivative" T. Begam, A.K. Nagpal and R. Singhal	Designed Monomers and Polymers	International VSP an imprint of Brill	7 4,311-330, 2004. Citation:3

3	Studies on Continous Glassfiber Reinforced Polyetherimide. Thermoplastic Composites". B. Singh. R. Singhal, R.K. Singh & A.K. Nagpal	International Journal of Plastic Technonology	International Springer	Aug 2004 Citation:-
32	Synthesis of poly (Arcylamide-co-Methyl Methalcrylate-co-Vinyl Amine-co-Acrylic acid) Hydrogel by Hofmann Degradation and Study of it's interaction with Acetaminophen". T. Begam, R.S. Tomar, A.K. Nagpal & R. Singhal	The Journal of Applied Polymer Science	International Wiley Interscience Online ISSN: 1097-4628	. 94 , No. 40-52, 15 Sep., 2004 Citation:-
33	Reactive Blends of Epoxy Resin (DGEBA) Crosslinked by Anionically Polymerized Polycaprolactam : Kinetics of Epoxy cure and Decomposition". A.Gupta, R. Singhal and A.K. Nagpal	The Journal of Applied Polymer Science	International Wiley Interscience Online ISSN: 1097-4628	Vol. 92 , No. 2, 687-697, 2004 Citation:-
34	Study on Crosslinking Reaction of Epoxy Resin (DGEBA) by Anionically Polymerized Polycaprolactam: Part – I"; A. Gupta, R. Singhal and A.K. Nagpal	The Journal of Applied Polymer Science	International Wiley Interscience Online ISSN: 1097-4628	Vol. 89 , 3237-3247, 2003 Citation:-
35	A Comparative Study of Swelling Properties of Hydrogels based on Poly (Acrylamide-Co-Methylmethacrylate) Containing Physical & Chemical Crosslinks"; T. Begam, A.K. Nagpal and R. Singhal	The Journal of Applied Polymer Science	International Wiley Interscience Online ISSN: 1097-4628	Vol. 89 , 2003 , 779-786 Citation:12
36	Study of Cure Kinetics of Polyacrylamide Hydrogels by Differential Scanning Calorimetry"; R. Singhal, S. Sachan & J.S.P. Rai	Iranian Polymer Journal	International Iran	Vol. 11 , No. 3, 2002 , 143-149 Citation:5
37	Effect of Dynamic crosslinking on Crystalliation and Thermal Degradation of Polypropylene in Polypropylene (PP)/Ethylene Propylene Diene (EPDM) Rubber Blends"; A.K. Jain, N.K. Gupta, R. Singhal and A.K. Nagpal	Material & Manufacturin g Processes	International Taylor and Fransis	Vol.17 , (3), 2002 , 415-431 Citation:9

38	Study of Multilayer Matrices for Controlled Release of Drugs"; R. Singhal, A.K. Nagpal and G.N. Mathur	Indian Journal of Chemical Technology	International NISCAIR, India	Vol. 8, Sept 2001, 396-401 Citation:-
39	Thermal Transitions and Morphological Behaviour of Polyether Ether Ketone and Liquid Crystalline Polymer Blends"; M. Goel, R. Singhal, L.D. Kandpal & A.K. Nagpal,	Material and Manufacturing processes	International Taylor and Francis	Vol. 78, 12, 2000, 2089-2103 Citation:5
40	Effect of Dynamic Crosslinking on Impact Strength and other Mechanical Properties of Polypropylene (PP) Ethylene Propylene Diene rubber (EPDM) Blend"; A.K. Jain, A.K. Nagpal, R. Singhal & N.K. Gupta	The Journal of Applied Polymer Science	International Wiley Inter Science Online ISSN: 1097-4628	Vol. 16 No.3, 2001 427-437 Citation:71
41	Effect of Dynamic Crosslinking on Tensile Yield Behaviour of Polypropylene (PP/Ethylene Propylene Diene Rubber (EPDM) blends." A.K. Jain, N.K. Gupta, R. Singhal & A.K. Nagpal	The Journal of Applied Polymer Science	International Wiley Inter Science Online ISSN: 1097-4628	Vol. 78, 12, 2000 2104-2121 Citation:25
42	Study of Ethyl Cellulose-Benzoic acid Interactions in Matrices for Controlled Drug Release by Differential scanning calorimetry." R. Singhal, A.K. Nagpal & G.N. Mathur	J. Thermal Analysis & Calorimetry	International Springer	Vol. 55, 1999, 29-38 Citation:6
43	Curing and Rheological Behaviour of Vinyl Ester Resins Prepared in Presence of Tertiary Amines"; S. Agrawal, R. Singhal & J.S.P. Rai	J. Macromolecular Sci. Pure & Appl. Chemistry	International Taylor & Francis ISSN 1060-1325 (Print), 1520-5738 (Online) Publication Frequency 12 issues per year	Vol. 36, Issue 5-6, 1999, 759-773 Citation:13

44	Controlled Release behavior of Ethyl Cellulose Matrices Part-I” Reena Jain, & G.N. Mathur	J. of Polymer Materials	International ISSN: 0973-8622 e-ISSN: 0976-3449	Vol. 13, 1996, 139-145. Citation:1
44	“Effect of Additives on Controlled Release properties of cast Ethyl Cellulose Matrices”	J. of Polymer Materials	International ISSN: 0973-8622 e-ISSN: 0976-3449	Vol. 14, 1997, 311-316. Citation:2

Publications in Proceedings

- 1) Effect of dynamic crosslinking on morphology, physic-mechanical, thermal, rheological and viscoelastic responses of blends of Isotactic polypropylene (PP) and nitrile rubber (NBR) AK Jain, R. Dhyani, P.K. Kaicher , R.Singhal proceedings of Recent Advances in polymers and composites 457,2000.
- 2) Synthesis and Characterisation of modified Hydrogels based on copolymer of acryl amide and alkyl acrylate ; T.Begam, AK Nagpal , R.Singhal proceedings of Recent Advances in polymers and composites 268,2000.
- 3) Wednesday June 18th 2008 1:20 pm Room no 4, Mc Kimmon Conference Centre, R.Singhal “A study of Controlled Drug delivery of Smart Hydrogels based on poly (AAM-co-AAc-co-BMA); Effect of Hydrogel Composition “ Reena Singhal, I Gupta.

LIST OF RESEARCH PARERS PUBLISHED IN NATIONAL JOURNALS/BOOKS

- 1) Polymeric Composite Films for Slow Drug Release”; Reena Jain & G.N. Mathur, CGCRI Bulletin vol. 36 No. 3-4 July Dec. 1989, 76-79.
- 2) “Injection Moulds,; Designing for Higher Profits”; Reena Jain & G.N. Mathur, Popular Plastics and Packaging, June 1990, 43-47.
- 3) "Scanning Electron Micrograph Study of Controlled Release Matrices based on Ethyl Cellulose and Benzoic Acid"; R. Singhal, A.K. Nagpal and G.N. Mathur, EMSI-Bulletin, Vol. 3 No. 2 Dec. 2002, 26-29.
- 4) "Thermo-Mechanical and Characterization Behaviour of Polypropylene (PP)/Ethylene Propylene (EPDM) Rubber Blends"; A.K. Nagpal, R Singhal, A.K. Jain & N.K. Gupta. It was published in the Book - " Indian Plastics Industry. Moulding the Future" Saket Pub. Ltd. Ahmedabad, India; Feb. 2003, 199-209.
- 5) "Super Absorbent Polymers : A Boon for preservation of water and agriculture"; R.S. Tomar, B. Shukla, A.K. Jain, R. Singhal & A.K. Nagpal, Plastic Digest; Vol. 3, No. 18 Feb. 2003.
- 6) "Solventless Polyester Varnishes as Electric Insulating Material : A Review” ; B. Shukla R.S. Tomar, P.K. Singh, R. Singhal & A.K. Nagpal, Plastic Digest, Vol. 3 No. 21 June, 2003.
- 7) “Intelligent Hydrogels” I Gupta , A.K.Nagpal, R.Singhal; Plastic Digest, August, 2003.

**PAPER PRESENTED IN NATIONAL & INTERNATIONAL CONFERENCES /
PUBLISHED IN PROCEEDINGS**

III a) INVITED LECTURES IN NATIONAL & INTERNATIONAL WORKSHOPS AND CONFERENCES

- 1) Invited talk titled , Polymeric Hydrogels:Tailor Made Structures And Applications Of Scanning Electron Microscopy ;Reena Singhal ;**National conference on Advancements in Polymeric Materials**,organized by DMSRDE at Kanpur on 26-28 Feb 2015
- 2) Invited talk titled ,”Solid regenerable superabsorbent hydrogels based on Poly(acrylicacid/acrylamide/ sodium humate) for removal of Heavy metal ion/dye by adsorption from Industrial waste waters;Reena Singhal & Tripti Singh;**International conference on Advancements in Polymeric Materials**,organized by CIPET at Lucknow on 1-3 March 2013
- 3) Invited talk titled, “Polymeric Biomaterials : An overview ” Reena Singhal Presented in **All India Seminar on Advance in Materials and Material Selection in Design, August 24-25th 2012** at HBTI Kanpur.
- 4) Key note talk titled, “Naveen Biomedical Upyoogon ke liye smart bahuluk adharit bhahukriyantamk jaldharak gel ”, Reena Singhal, Seema Awasthi , Presented in **Hindi Sanghoshti** held on **12.12.12** at DMSRDE , Kanpur.
- 5) Invited Talk in **TEQUIP Sponsored Faculty Development course** on Teaching Learning Process on ,”Importance of Practicals and Tutorials “on 28.2.13 at H.B.T.I.,Kanpur.
- 6) Invited Talk in **TEQUIP Sponsored Faculty Development course** on Teaching Learning Process on ,” Role And Period Of Industrial Training In Curriculum Of Technical Education “on 2.7.13 at H.B.T.I., Kanpur.

III b) RESEARCH PAPERS PRESENTED IN NATIONAL & INTERNATIONAL CONFERENCES

- 1) Reena Singhal and Tripti Singh,**National conference on “Oleo chemicals Production and Industrial application”**Jan 10-11, 2015, at HBTI, Kanpur; Superabsorbent hydrogels for Sustainable Development based on Poly (acrylic acid\acrylamide \sodium Humate) for Heavy metal ion removal from industrial waste waters.
- 2) “Mathematical approach for Effect of non-ionic content on Controlled Drug Diffusion from Smart Hydrogels based on Poly(AM-co-HEA-co-AA)”Reena Singhal, Seema Awasthi;Presented

- in ,”**Polymers on the Frontiers of Science and Technology**”;**International Conference** organized by Punjab Univ. & APA on Feb21-23 ,2013 at Chandigarh.
- 3) “Development of Solid Adsorbant based on Bio-polymer and Polymeric Hydrogels for absorption for heavy metal ions and dyes from industrial waste water”, Reena Singhal, Deepa Gupta, Presented in **All India Seminar on Advance in Materials and Material Selection in Design, August 24-25th 2012** at HBTI Kanpur.
 - 4) “A mathematical study on Swelling/Controlled release Behaviour of Acetaminophen and other model drugs from Smart hydrogels based on Acrylic acid, Acrylamide modified with Butyl meth acrylate.” Reena Singhal; **Advances in Materials & Material Selection in Design (AMMSD-2012)** H.B.T.I, Kanpur
 - 5) “A mathematical study on Swelling/Controlled release Behaviour of Acetaminophen and other model drugs from Smart hydrogels based on Acrylic acid, Acrylamide, modified with Butyl methacrylate ” **APA International Congress on Advance in Human Health Care Systems, Health Care 2012, Feb 20-23 2012**, New Delhi jointly organized by APA
 - 6) Synthesis and Characterisation of Superabsorbent Polymers based on Acrylonide and Acrylic acid for agricultural and other applications; Rajeev Tomar, A.K.Nagpal and Reena Singhal; **PLASTINDIA 2009, International Conference Feb 49, 2009.**
 - 7) “A comparative study of Swelling behavior of Super absorbent Hydrogels prepared by Gamma Radiation and Solution Polymerisation”, A.k.Nagpal , Reena Singhal and Rajeev Tomar, Presented in **International Conference on Surface and Colloid Science and the 83rd ACS Colloid and surface Science Symposium** held on **14-19th June 2009** at Columbia University, N.Y., New York , U.S.A.
 - 8) “Deveopment of fast curing Novel Epoxy-Nylon 6 Blends and Reaction Injection Moulding Applications” ;Alba Gupta, A.K. Nagpal and Reena Singhal; Presented in International Conference on **“Polymer Science and Technology : Vision and Scenario (APA - 2009)** 17-20th December 2009, held at IIT Delhi.
 - 9) Seema Awasthi, Reena Singhal “Environment Sensitive Hydrogels: New challenges and applications” presented in **Hindi Sanghosti on Material Science** held at DMSRDE, Kanpur on **13-14th Feb 2008.**
 - 10) A Study on Controlled Drug Delivery from Smart Hydrogels based on Poly(AAm-co-AAc-co-BMA):Effect of HydrogelComposition,“Reena Singhal*, I. Gupta;presented in International Conference ,”**82nd ACS Symposium on Colloid & Surface Science,**” held at North Carolina State University,Raleigh on **15-18 june 2008 in U.S.A.**
 - 11)A Study on Superabsorbent Polymer based on Poly(AAm-co -AAc) based s:Effect of Synthesis Parameters on Swelling ;Rajiv Singh Tomar, A.K. Nagpal, , Reena Singhal;presented in **“International Conference Advances in Polymer Science.(POLY- 08)”** held at I.I.T.,Delhi on 28-31 Jan. **2008.**
 - 12)Solventless Polyester Resin: A Composite Material For Electrical Insulation , Bilson Shukla, Varun Dixit, Pradeep Kr.Singh*, Reena Singhal and A.K.Nagpal, presented at **International conference INNCOM 2006** held at IIT Kanpur on 14-16 December**2007.**
 - 13)A Study on Mechanical and Electrical Properties of Reactive Blends of Epoxy Resin and Polycaprolactam ,Gupta A., Singhal S.K., Dixit V. and Nagpal A.K.& Singhal R. presented at **International conference INNCOM 2006** held at IIT Kanpur on 14-16 December**2007**

- 14) Influence of Phenoxy on Mechanical and Electrical Properties of DDS-Cured DGEBA Epoxy Resin matrix used in advance Composites; Dixit V., Gupta A., Shukla B., Nagpal A.K. & Singhal R; presented at **International conference INNCOM 2006** held at IIT Kanpur on 14-16 December **2007**
- 15) SEM fracture surface study of solventless polyester based thermosets Bilson Shukla, Reena Singhal and A.K.Nagpal, paper presented at **EMSI_2007** at Delhi University on 26-28 Nov **2007**.
- 16) "Effect of Morphology on Mechanical Properties of Poly(Hydroxy Ether of Bisphenol-A) or Phenoxy modified epoxy composites". Varun Dixit, A.K.Nagpal, Reena Singhal; **Presented in Second International Conference on recent advances in composite materials (ICRACM-2007) held at India Habitat Centre on Feb.20-23; 2007 organized by B.H.U. Varanasi.**
- 17) "A Study on the effect of composition of smart nature of Hydro gels based on Acrylamide, Butyl Methacrylate and Acrylic acid". I Gupta, A.K.Nagpal, Reena Singhal presented in "**International Conference on Design of Biomaterials (BIND-06)**" held on 8-11 Dec 2006 at IIT Kanpur.
- 18) "A Study on Effect of Curing Agent on Thermal Behaviour of DGEBA & TGDDM Epoxy Resin blended with thermoplastic Phenoxy Resin." V.Dixit, B.Shukla, A.K.Nagpal & R.Singhal; presented in **MACRO-2002**, held at NCL, Pune in Dec. 2006
- 19) "Study of Acetaminophen Crystallization in Hydrogel matrices based on Acrylamide-co-Vinyl Amine-co-Acrylic acid" Presented in **National Conf. on Biomat. Tissue Engg. & Medical Diagnostics**, held on 24-26 Feb 2005 at I.I.T., Delhi
- 20) "Utilization of Lignin in solventless Polyester Composite Materials," B.Shukla, Y.V.Sood, P.K.Singh, presented in *International Conference on "Recent Advances in Composite Materials," held at I.I.T., BHU, ON 17-19 Dec. 2004*
- 21) "Novel Application of Epoxy /Phenoxy blends in Composites", V.Dixit, B.Shukla, A.K.Nagpal & R.Singhal; presented in **International Conference on "Recent Advances in Composite Materials,"** held at I.I.T., BHU, ON 17-19 Dec. 2004
- 22) "Synthesis of Physically Crosslinked modified Polyacrylamide based Copolymeric Hydrogels and Study of its Interaction with Acetaminophen" **International Conference, "POLYMER NETWORKS-2004" held on Aug.15-19, 2004, at NIH, Washington DC, Bethesda, MD, USA.**
- 23) "Synthesis and Characterization of Superabsorbent Hydrogels" R.S.Tomer, A.K.Jain, R.Singhal & A.K.Nagpal; *International Conference, "POLYMER NETWORKS-2004" held on Aug.15-19, 2004, at NIH, Washington DC, Bethesda, MD, USA.*
- 24) Scanning Electron Microscopy of Gamma Radiation Processed Mango Wood Polymer Composites. S.K. Gupta, N.K. Gupta, R. Singhal and A.K. Nagpal, "**Electron Microscopy and Allied Fields**", at National Physical Laboratory-New Delhi April 1-3, 2004;
- 25) Interphase and Compatibilization of polypropylene/Nitrile Butadiene Rubber PP/NBR Blend : Morphology and the Property Profile. Anil K. Jain, Raman Dhyani, A.K. Nagpal & Reena Singhal; "**Electron Microscopy and Allied Fields**", at National Physical Laboratory-New Delhi April 1-3, 2004;
- 26) "Super Absorbent Polymer : A boon for preservation of water and agriculture". R.S. Tomar, A.K. Jain, R.S. Singhal & A.K. Nagpal. Presented at International Conference on "**Plastic and Environment Opportunities and Challenges**" on Feb. 24-25, 2003 held at Shriram Institute for Industrial Research, New Delhi and also published in Plastic Digest.

- 27) "Morphology Selective property profiles of polypropylene (PP), Nitrile Rubber (NBR) Blends," Reena Singhal, Raman Dhyani, Govind Sharma and A.K. Jain, Published in the proceedings of 26th Annual Conference on "**Frontiers of Electron Microscopy and Allied fields**" held at CPRI, Shimla on 16-18 April, 2003.
- 28) "SEM Studies of Epoxy Resin (DGEBA) Crosslinked by Anionically Polymerized Polycaprolactam," Alka Gupta, K.N. Pandey, Reena Singhal and A.K. Nagpal published in the proceedings of 26th Annual conference on "**Frontiers of Electron Microscopy and Allied Fields**" held at CPRI, Shimla on 16-18 April, 2003.
- 29) "Application of Super Absorbent Polymers in Efficient Water Management for Agricultural and related areas/fields" Presented at *National Seminar on **Environmental Management Systems in Chemical and Allied Industries***" held at Institution of Engineers & H.B.T.I. Kanpur on 4-5 Oct. 2002.
- 30) "Synthesis and Characterization of Smart Hydrogels Based on Acrylamide Butyl Methacrylate and Acrylic acid – II. I. Gupta, A.K. Nagpal and R. Singhal. **Presentation in International Seminar on "Macro-2002"** held at IIT, Karagpur on 9-11 Dec. 2002.

Following Papers No. 30 to 39 were presented in National Seminar on "**Recent Development of Polymers**" **POLYCON-2002** held at H.B.T.I. Kanpur on 16-17 Aug. **2002**.

- 31) "Selection of Novel Crosslinking Agent for polypropylene (PP)/Ethylene Propylene Diene Rubber (EPDM) Blend – Auto motive Sector". A. K. Jain R. Singhal and A.K. Nagpal.
- 32) "Gamma Radiation Technology : The Future is Today" P.K. Jain, R. Singhal A.K. Jain and A.K. Nagpal.
- 33) "Benefits of Super Absorbent Polymers". R.S. Tomar, R. Singhal and A.K. Nagpal.
- 34) "Fungal Decay Resistance of Rubber Wood-Polymer Composites processed by Gamma Radiation" S.K. Gupta, N.K. Gupta, R. Singhal and A.K. Nagpal.
- 35) "Compatibilizing Influence of agents on PP/ NBR Blend, Interfacial Tension, Phase Morphology and Mechanical properties". R. Singhal, A.K. Jain, R.L. Dhyani, P.K. Kaicker and A.K. Nagpal.
- 36) "Synthesis Characterization of Copolymer based Acrylamide and Methylmethacrylate and its Vinylamine group containing Derivative". T. Begam R. Singhal and A.K. Nagpal
- 37) "Environment Sensitive Hydrogels" I. Gupta A.K. Nagpal and R. Singhal.
- 38) "New Developments in Solvent less Polymer Varnishes" B. Shukla R. Singhal, P.K. Singh and A.K. Nagpal.
- 39) "Synthesis and Optimization of Reactive Blends Based on Diglycidyl ether of Bisphenol A (DGEBA) and Polycaprolactam". A Gupta. R. Singhal and A.K. Nagpal.
- 40) "Effect of Ag. Addition on the Co-Polymeric chains of Se. Te In Se 80 x Te 20 Ag x Glasses" R.S. Sharma, R.K. Shukla, A. Kumar R. Singhal and A.K. Nagpal.

- 41) "Synthesis and characterization of Smart Hydrogel based on Acrylamide, Butyl Methacrylate and Acrylic Acid, " Indu Gupta, A.K. Nagpal & R. Singhal Presented in National Workshop on, "**Smart Materials and Composite Structures**" (**SMCS-2002**) held at IIT, Kanpur on 19/23 Feb. **2002**.
- 42) "Morphology of Dimethylol Phenolic Resin crosslinked Nitrile rubber in Isotactic Polypropylene matrix". R.L. Dhyani, A.K. Jain, R. Singhal, A.K. Nagpal presented in **25th Annual Conference of the Electron Microscope Society** held at IIT, Bombay on 19-22 Feb. **2002**.
- 43) "Studies on Thermal Degradation of Dynamic Crosslinked Polypropylene (PP /Ethylene Propylene Diene Rubber Blends". Anil K. Jain, Neeraj K. Gupta, Reena Singhal & A.K. Nagpal presented and published in proceedings of National Symposium on "**Recent Advances in Polymers and Composites**" held at DMSRDE, Kanpur on Dec. 1-2, **2000**.3
- 44) "Modification of polymeric chains of selenium on alloying with Telluroium : A DSC Study " A.Kumar, R.K. Shukla, R. Singhal and A.K. Nagpal, Presented and Published in proceedings of National Symposium on "**Recent Advances in Polymers and Composites**" held at DMSRDE, Kanpur on Dec. 1-2, **2000**.
- 45) "Synthesis and Characterisation of modified Hydrogels based on Copolymer of Acrylamide and Alkylacrylate" Tamanna Begam, A.K. Nagpal and Reena Singhal presented and published in proceedings of National Symposium on "**Recent Advances in polymers and composites**" held at DMSRDE, Kanpur on Dec. 1-2, **2000**.
- 46) "Thermo- Mechanical Behaviour of Thermotropic liquid crystalline polymer (TLCP) / Polyether ether Ketone (PEEK) Blend " Mudit Goel, R. Singhal, L.D. Kandpal & A.K. Nagpal. Presented and published in Proceedings of National Symposium on "**Recent Advances in Polymers and Composites**" held at DMSRDE, Kanpur on Dec. 1-2, **2000**.
- 47) "Effect on Dynamic crosslinking on Morphology, Physicomechanical, Thermal, Rheological and Viscoelastic responses of blends of Isotactic Polypropylene (PP) and Nitrile Rubber (NBR)" A.K. Jain, R.L. Dhyani, P.K. Kaicker, R. Singhal and A.K. Nagpal, presented and published in Proceedings of **National Symposium on Recent Advances in Polymers and Composites" held at DMSRDE, Kanpur on Dec. 1-2, 2000**.
- 48) "Morphology of Dynamically cross linked Ethylene Propylene Diene (EPDM) Rubber blends" N.K. Gupta, A.K. Jain, R. Singhal & A.K. Nagpal, Presented and Published in the proceedings of **National Conference on "Electron Microscopy"** at DMSRDE on Dec. 1-3, **1999**.
- 49) "Microstructural Studies on the Ethyl Cellulose matrices /Films by Scanning Electron Microscopy for Controlled release of Benzoic Acid." R. Singhal, A.K. Nagpal and G.N. Mathur, Presented and

published in the proceedings of **National Conference on "Electron Microscopy"** at DMSRDE on Dec. 1-3, **1999**.

- 50) "Morphological Studies of polyether ether Ketone (PEEK) Liquid crystalline Polymer (LCP) Blends by Scanning Electron Microscope" M. Geol, R. Singhal, L.D. Kandpal & A.K. Nagpal, presented and published in the proceedings of **National Conference on "Electron Microscopy"** at DMSRDE on Dec. 1-3, **1999**.
- 51) "Effect of Molecular Weight on Controlled release Behaviour of N-butyl Half ester of copolymer of Methyl vinyl ether and Maleic anhydride" R. Singhal and G.N. Mathur, presented and published in **International Symposium on "Polymers 99 (Polymer beyond AD 2000)"** held at IIT, New Delhi, Jan 12-15 **1999**.
- 52) "Curing and Decomposition behavior of Vinyl ester resins", S.Agarwal, R.Singhal and JSP Rai Presented in **10th national Symposium on "Thermal Analysis"** at DMSRDE Kanpur **Dec 20-21th 1995**.
- 53) "Rheological and Behaviour of Multi component Polypropylene blends " M.Shukla, D.Srivatava, R.Singhal , A.K.Nagpal and JSP Rai Presented in **10th National Symposium on "Thermal Analysis"** at DMSRDE Kanpur **Dec 20-21th 1995**.
- 54) "Cure kinetics of Polyacrylamide hydrogels by differential scanning calorimetry" S. Sachan, R.Singhal and JSP Rai. Presented in **10th National Symposium on "Thermal Analysis"** at DMSRDE Kanpur **Dec 20-21th 1995**.
- 55) "polymeric encapsulants for controlled drug release " Reena Jain and GN Mathur presented in "IUPAC **international symposium on "Molecular design on functional polymer "** held at Seoul Korea, May 18-19, **1989**
- 56) "Polymers as controlled drug release systems " Reena Jain & G.N. Mathur, presented in **2nd National Conference on "Biomaterials and Artificial Organs "** held at IIT, New Delhi, April 13-14, **1988**.