

**Dr. Reena Singhal**  
**Professor**



B.Sc., B. Tech.(Plastic Tech.), M. Tech.(Plastic Tech.), Ph.D.(Plastic Tech.)  
Department of Plastic Technology (Chemical Technology)  
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**PERSONAL DETAILS**

Date of birth: 28.10.1963

Husband's name: Dr. Shalendra Kumar Singhal, Maiden name: Reena Jain

Contact Address Residence: 2A/69 A, Azad Nagar ,Kanpur -208002

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**Employment Details:**

- 1) *Presently serving Professor in Plastic Technology Deptt. at H.B.T.I., Kanpur since 28.12.2006 ;and Head, Plastic Technology Deptt.since19.8.2014 to 21.08.2017.*

**Teaching Experience** : **29 years,**

**Present Salary** : Rs.72,240 Basic + DA and other Allowances;(Scale 37,400-67,000), Grade Pay Rs.10,000

- 2) **Name of Post:** **PROFESSOR , Plastic Technology;** Date of joining in the Institute: 07.04.1989

- 3) **Service Records:**

Sl. No.	Name of Employer	Post Held	Period		Pay Band / Pay Scale and AGP / Basic Pay	Remarks
			From	To		

1.	The Plastic Product Ltd., Kanpur (A unit of J.K. Industries)	Designer Trainee	August 1988	March 1989	Rs.2200/p.m.	---
2.	H.B.T.I., Kanpur	Lecturer	7.04.1989	07.04.1995	2200-4000	---
3.	H.B.T.I., Kanpur	Sr. Lecturer	8.04.1995	27.12.1998	3000-5000	---
4.	H.B.T.I., Kanpur	Assistant Professor	28.12.1998	31.12.2005	12000-18300	---
5.	H.B.T.I., Kanpur	Associate Professor	01.01.2006	27.12.2006	37400-67000/9000	---
6.	H.B.T.I., Kanpur	Professor	28.12.2006	Till date	37400-67000/10000	---

#### 4) Educational Qualifications

Sl. No.	Name of Examination	Name of the college/ Institute / University	Year of passing	Subjects	% Marks	Division
1.	Ph.D. (chem. Tech), Plastic technology	H.B. Technological Institute, Kanpur/Kanpur University	1998	Study of physico chemical factors for the controlled release of drugs from polymer matrices	--	--
2.	M. Tech (chem. Tech), Plastic technology	H.B. Technological Institute, Kanpur /Kanpur University	1988	Chemical Technology ,Plastic technology	86.5%	Ist with Distinction Ist rank in all CT branches
3.	B. Tech (chem. Tech), Plastic technology	H.B. Technological Institute, Kanpur/ Kanpur University	1986	Chemical Technology ,Plastic technology	80.1%	Ist with Distinction II nd rank in all CT branches

4.	B.SC	Kanpur university, Kanpur	1983	Physics, Chemistry, Maths	66.5%	First
5.	Intermediate	U.P, Board, Allahabad	1981	Hindi, English, Physics, Chemistry, Maths	67.4%	First
6.	High School	U.P. Board, Allahabad	1979	Hindi, English, Maths, Biology, Science	68.6%	First

**5) 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).

**6) Administrative Experience:**

- a) Acted as Dean Research & Development since 15.10.2015 to 15.11.2018
- b) Acted as Assistant Dean of Academics affairs since April 2010-Dec 2010.
- c) Acted as Assistant Dean of Planning and Resource generation Dec2010 – till March 2013.
- d) Acted as Warden, Girls Hostel( I,II,IV ) HBTI Kanpur for nearly 22 years.
- e) Acted as Convener Department Purchase Committee.
- f) Acting as Member in various Academic Committees of Institute such as Board of Studies, Academic Council, Accreditation Committee, and Selection Committee.
- g) Acted as member in Women Welfare Committee of GBTU.
- h) Acted as HOD, Plastic Technology since 19.08.2014 to 21.08.2017
- i) Acting as Expert Plastics and Rubber in U.P. Police Stores & Purchase Committee.
- j) Acting as Convener of Ph.D. Ordinance Committee for preparing First Ordinance of HBTU, Kanpur
- k) Acting as Convener of Rate Contract for Glasswares and Chemical of HBTU, Kanpur
- l) Acting as Member of Committee for preparation of Consultancy & Testing rules of HBTU, Kanpur
- m) Acted as Convener of Committee for preparation of First Ph.D. Ordinances of HBTU, Kanpur

- 7) **Examiner ship:**
- 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; Mahatma Gandhi Chitrakoot Gramodaya Vishwavidyalaya, Chitrakoot, Satana, Delhi Technological University, Delhi; Himachal University ,Shimla.
  - M. Tech for Delhi College of Engg. ,& C.I.P.E.T., Lucknow.
- 8) **Academic Courses Taught:**                      10 Courses                      Details in **Annexure I**
- 9) **QIP Courses attended:**                      11 Courses                      Details in **Annexure II**
- 10) **Reviewer for following reputed International Journals:**                      (**Details in Annexure III**)
- Acting as reviewer for following reputed International journals on regular basis for last one decade.
- 11) **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.
- 12) **Organization of workshop :**"Organized national level workshop titled "**Advancement in Plastic processing Techniques "**, on **March, 28 2017**, as **Convener for under graduate students.**
- 13) **Organization of Seminar:** Organized a Two days National Seminar on "Recent Development of Polymers” **POLYCON-2002** on 16-17<sup>th</sup>Aug. 2002 as Convener.
- 14) **Served on Advisory committee of International** conference International Conference on Advance Materials, Textiles and Processes, October 14-15, 2017,Day 1 October 14, 2017  
Venue: Orchid Hall ,Hotel Vijay International, Tilak Nagar, Kanpur
- 15) **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).

## 16) Recognitions Related To Research Activities

### Present area of research:

- a) Biomedical polymers for applications in Controlled drug delivery
- b) Smart hydrogels for biomedical applications, polymer-drug interactions
- c) Super Absorbent hydrogels, and their applications in removal of heavy metal ions/Dyes from industrial waste waters.
- d) Other areas of interest are reactive polymer blends, and Thermal Analysis

## 17) Authored Chapters in Taylor & Francis Encyclopedia: ( Details in (Annexure IV)

Following **two Review chapters** are written on **Invitation from editor** of this 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.	Tripti Singh, Reena Singhal	Efficient and economical application of a spent waste adsorbent Cu <sup>2+</sup> ion loaded Poly(AAc-AM-SH) superabsorbent hydrogels by reusing it for the adsorption of phosphate ion	Environmental Pollution Select Proceedings of ICWEES-2016; Water Science and Technology Library, Vol. 77; V.P. Singh, S. Yadav, R.N. Yadava (Eds.)	Springer nature Singapore, Pte Ltd.	2017	978-981-10-5794-6
2.	Reena Singhal	Hydrogels, Multi-component Anionic :Swelling and Controlled Release	1 <sup>st</sup> 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

3.	Seema Awasthi, Reena Singhal	Hydrogels: Mathematical Approaches	1 <sup>st</sup> 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
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**18) Research projects Completed : Three (Details In Annexure V)**

- a) 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.
- b) 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.
- c) Seed Money **Superabsorbent hydrogels for soil modification for reducing water requirements and promoting plant growth**. Rs .1.30 lacs under TEQUIP- II grant.
- d) Member of **centre of excellence on lipids at HBTI, Kanpur;**  
Project cost: 400 lacs. Completed in March 2016
- e) Seed Money **Development of high swelling Co-polymer based Superabsorbent Hydrogels for removal of dyes from Industrial waste water** Rs .2.0 lacs under TEQUIP- III grant.

**19) Rsearch Students (Ph. D) guided: TOTAL-Eight (Details in Annexure VI)**

- A) **Seven Awarded  
One in progress**

20) **PUBLICATIONS AND RECOGNITIONS RELATED TO RESEARCH ACTIVITIES**

B) **Total Research Papers Published: Total research papers = 42+3+3+7+60=117** (Annexure II a & b)

**I have 397 citations on Google Scholar out of any research work.**

**13 Papers are in H-Index**

❖ No. of International Published Research Papers	= 42
❖ No. of International Published Research Papers	= 07
❖ No. of Invited Talk delivered	= 11
❖ No. of Presented Research Papers	= 57
<b>Grand Total</b>	<b>= 117</b>

21) **Industry-Academic Interaction**

a) Engaged in consultancy / Testing coming to the Department for the Private Government Organization/Industries etc. Developed Testing for Railway Signal Lens for DRDO

b) Conducted EDP Short Term Training Program on House hold Adhesives under STEP as Course Coordinator

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

23) **PROFESSIONAL MEMBERSHIPS (LIFE MEMBER)**

a) The Society of Polymer Science.

b) The Paint & Coating Tech. Association.

c) The Electron Microscope Society of India.

d) Oil Technologist Association of India

e) Indian Plastic Institute

f) Vigyan Bharati

g) Society for Microscope Science & Technology

Place:

(REENA SINGHAL)

**Contributions****(Annexure I)****Classroom teaching**

<b>Sl. No.</b>	<b>Name of the Subject taught</b>	<b>Programme (B. Tech./ M. Tech. /MCA) with year / Semester</b>	<b>No. of years of the subject being taught</b>
1.	Polymerization Engineering I	B. Tech.	25
2.	Polymerization Engineering II	B. Tech.	02
3.	Plastic Product and Mould Design	B. Tech.	25
4.	Introduction to Plastic Technology	B. Tech.	09
5.	Structure and Properties of Polymers	B. Tech.	02
6.	High Polymer Technology	B. Tech.	02
7.	Polymer Chemistry	B. Tech.	01
8.	Polymeric Foams and Adhesives	B. Tech.	01
9.	Chemical Engg. of High Polymers	M. Tech.	05
10.	Plastic Design	M. Tech.	05



7) **QIP Course**

(Annexure II)

Sl. No.	Name of Course	Organized by	Sponsored by	Venue	Date
1.	Advance in Bio- inorganic and Nano Chemistry	D.A.V. (P.G.) College, (C.S.J.M. University)	Indian Science Congress	IIT, Kanpur	November 12-13, 2011.
2.	“Micro & Nano Fabrication”	Indian Institute of Technology	TEQIP- II	IIT, Kanpur	27 <sup>th</sup> Feb to 2 <sup>nd</sup> Mar, 2012
3.	Chemical and material science and material engineering	Indian Institute of Technology	(TEQIP: Knowledge Incubation Center)	IIT, Kanpur	22-23 February, 2014
4.	Structure and Characterization of Materials	Indian Institute of Technology	TEQIP	IIT, Kanpur	December 22-26, 2014
5.	State Level Faculty Interaction Seminar	Department of Technical Education Government of Uttar Pradesh	TEQIP – II	H.B.T.I., Kanpur	8-9June, 2015.
6.	MHRD'S National Mission for Teachers and Administrators Management Capacity Enhancement Programme	Indian Institute of Management	TEQIP- II	IIM, Indore	24-08-15 to 30-08-15.
7.	Short Term Course Under Quality Improvement Programme on Yoga and life Management	Indian Institute of Technology, Delhi.	TEQIP-II	IIT, Delhi	07-11 Nov., 2016
8.	Two days training Basic Liquid Chromatography	Water Global Services	TEQIP-II	H.B.T.I., Kanpur	28 th March, 2017
9	Management Capacity Enhancement Programme Incompliance with NBA	Electrical Engineering Department., SOE,	TEQIP-II	H.B.T.I., Kanpur	29-31 March, 2013

	and NAAC Accreditation	Harcourt Butler Technical University ,Kanpur in Colobration with ESCI			
10.	Induction Programme for New Students Three Day Training Workshop for Faculty Mentors	Harcourt Butler Technical University ,Kanpur	TEQIP-III	H.B.T.U., Kanpur	22-24 Sept. 2017
11.	Re-inventing fly ash into near-whitened material for generating white polymer Composites :Technological Advancements	IIT, Kanpur	AICTE	IIT, Kanpur	26.2.18-03.03.18
12.	Outcome based Accriditation for Undergraduate engineering programs	Harcourt Butler Technical University ,Kanpur	TEQIP-III	H.B.T.U.& UPTTI , Kanpur	22.3.2018-23.3.1018

**Reviewer for following reputed International Journals:****(Annexure III)**

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

<b>Sl. No.</b>	<b>Journals Name</b>	<b>Publishing House</b>
1.	Journal of Applied Polymer Science	
2.	Journal of Macromolecular Sci.: Pure & Appl. Chemistry	Taylor & Francis; International
3.	Biomacromolecule	
4.	Polymer Bulletin	Springer; International
5.	Carbohydrate Polymer	
6.	Material Chemistry & Physics	
7.	Desalination & Water Treatment	
8.	Brazilian Journal of Chemical Engineering	
9.	Journal of Drug Delivery	
10.	Journal of Polymer Research	
11.	Chemical Engineering Journal	
12.	Separation Science and Technology	Taylor & Francis; International
13.	Bioresource Technology	
14.	Polymer for Advanced Technologies	
15.	Applied Clay Sciences	
16.	Journal of Polymer Materials	
17.	Chinese Chemical Letters	
18.	Malaysian Polymer Journal	
19.	e-Polymers	
20.	European polymer Journal	

21.	RSC Advances	
22.	Industrial and Engineering Chemistry Research	
23.	Desalination and water treatment	Taylor & Francis; International
24.	Soft Materials	Taylor & Francis; International
25.	Designed Monomers and Polymers	Taylor & Francis; International
26.	Polymer Testing	Taylor & Francis; International
27.	International journal of Biological Macromolecules	
28.	Indian Journal of materials science	
29.	Journal of Petroleum Exploration and Production Technology	
30.	The Canadian Journal of Chemical Engineering	Wiley; International
31.	Polymer Composites	Wiley; International
32.	Journal of Molecular Liquids	Elsevier B.V;Amsterdam, The Netherlands,
33.	Environmental Technology	Taylor & Francis; International
34.	EXPRESS Polymer Letters	Electronic journal
35.	Chemistry Africa	International Springer;
36.	Sugar Tech	Springer; International
37.	Industrial & Engineering Chemistry Research	A.C.S. Publications; International
38.	Polymer Engineering and Science	Wiley; International

**Authored Chapters in Taylor & Francis Encyclopedia:****(Annexure IV)**

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

**b) Books Published****(In book chapters)**

<b>S. N.</b>	<b>Authors</b>	<b>Title of the book</b>	<b>Publication details</b>	<b>publisher</b>	<b>Year of publication</b>	<b>ISBN no.&amp; DOI</b>
<b>1.</b>	Tripti Singh, Reena Singhal	Efficient and economical application of a spent waste adsorbent Cu <sup>2+</sup> ion loaded Poly(AAc-AM-SH) superabsorbent hydrogels by reusing it for the adsorption of phosphate ion	Environmental Pollution Select Proceedings of ICWEES-2016; Water Science and Technology Library, Vol. 77; V.P. Singh, S. Yadav, R.N. Yadava (Eds.)	Springer nature Singapore, Pte Ltd.	2017	978-981-10-5794-6
<b>2.</b>	Reena Singhal	Hydrogels, Multi-component Anionic :Swelling and Controlled Release	1 <sup>st</sup> 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
<b>3.</b>	Seema Awasthi, Reena Singhal	Hydrogels: Mathematical Approaches	1 <sup>st</sup> 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

**Research projects Completed : Four**

**( Annexure V)**

<b>S.no.</b>	<b>Name of project</b>	<b>Sponsoring agency</b>	<b>Duration</b>	<b>Cost</b>
1.	<b>Polyether Ether Ketone (PEEK) Liquid Crystalline Polymer (LCP) Blends</b>	DMSRDE (DRDO)	31.10.2001.	3.71 lacs.
2.	<b>Development Of Copolymeric Hydrogels Based Adsorbents For Removal Of Toxic Heavy Metal Ions &amp; Dyes From Industrial Waste Waters</b>	UGC New Delhi	2.2011 to 31.1.2014	7.20 lacs
3.	<b>Superabsorbent Hydrogels For Soil Modification For Reducing Water Requirements And Promoting Plant Growth</b>	TEQUIP- II grant		1.30 lacs
4.	<b>Centre Of Excellence On Lipids At HBTI, Kanpur</b>	HBTI, Kanpur	March 2016	4.00 lacs
5.	<b>Development of high swelling Co-polymer based Superabsorbent Hydrogels for removal of dyes from Industrial waste water</b>	TEQUIP- III ; Seed Money	March 2018	2.0 lacs

**DETAILS OF Ph. D STUDENTS BEING GUIDED**

<b>S. No.</b>	<b>Name of Students</b>	<b>Topic</b>	<b>Stream &amp; University</b>	<b>Status</b>	<b>Capacity</b>
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	U.P. Technical University Lucknow	Thesis in awarded In 2014	Guide

		modified with Acrylic derivative”			
<b>7.</b>	Miss Tripti Singh	“Synthesis and Characterization of Multifunctional copolymeric Hydrogels”	U.P. Technical University Lucknow	Thesis in awarded In 2016	Guide
<b>8.</b>	Miss Shipra Agnihotri	“Synthesis and Characterization of Multicomponent Ionic Hydrogels based on Natural Carbohydrates for Water purification”	U.P. Technical University Lucknow	Submitted thesis in Nov.2018, Registered in March 2013;	Guide



**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	Citation
1.	Effect of Sodium Alginate Content in Acrylic Acid/Sodium Humate/Sodium Alginate Superabsorbent Hydrogel on Removal Capacity of MB and CV Dye by Adsorption	<b>Journal of Polymer and the Environment I.F. 1.971</b>	International Journal	Springer DOI : 10.1007/s10924-018-1349-6  13.12.2018	---
2.	Synthesis and characterization of poly (Acrylic acid/Sodium Alginate /Sodium Humate) Superabsorbent hydrogels. Part I: Swelling Characteristics and Agricultural Application Shipra Agnihotri, Dr. R. Singhal	<b>Journal of polymer materials –An International Journal</b>	International Journal	April,2017	----
3	Synthesis and characterization of novel poly (Acrylic Acid/Sodium Alginate/Sodium Humate) Superabsorbent hydrogels. Part II: The Effect of SH Variation on Cu <sup>2+</sup> ,Pb <sup>2+</sup> Fe <sup>2+</sup> metal ions, MB, CV dye adsorption study Shipra Agnihotri, Dr. R. Singhal	<b>Journal of Polymer and the Environment I.F. 1.971</b>	International journal	Springer DOI 10.1007/s10924-017-0956-y) 14 February, 2017	----
4.	Mathematical modeling of swelling for Analyzing the effect of high and low nonionic monomer content for poly (AM-co-HEA-co-AA)hydrogels; Awasthi, Reena Singhal*	<b>Journal of polymer material</b>	International M.D.I. Publications, India	Vol. 33, No. 2, <b>June2016</b> , 271-292	----
5	A Review: Tailor made Hydrogel Structures (Classifications and Synthesis Parameters); Reena Singhal, Kshitij Gupta	<b>Polymer Plastic and Technology and</b>	International Taylor & Francis	Published online in <b>Aug,2015</b> ;5 5:1, 54-70,	10

		<b>Engineering</b> <b>I.F 0.284</b>	ISSN 0360-2559 (Print), 1525-6111 (Online)  17 Issues /yr	DOI: 10.1080/03602559.2015.1050520	
6.	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	<b>Desalination and Water Treatment;</b> <b>I.F. 1.631</b>	International Taylor & Francis  ISSN 1944-3994 (Print), 1944-3986 (Online)	<b>DOI:</b> 10.1080/19443994.2013.859098  <b>Vol.53( 7), 2015;feb.2015;</b> pages 1942-1956  Citation:1	<b>6</b>
7.	Reuse of a Waste Adsorbent poly(AAc/AM/SH)-Cu Superabsorbent Hydrogel, for the Potential Phosphate ion Removal from Waste Water:  Matrix Effects, Adsorption Kinetics, and Thermodynamic Studies.  Tripti Singh, ReenaSinghal*	<b>Journal of Applied Polymer Science</b>  <b>I.F 1.600</b>	International Wiley Interscience  Online ISSN: 1097-4628	<b>Vol.129( 6), 2013;15 Sept.2013;</b> <b>3126-3139</b>  Citation:4	<b>12</b>
8	Kinetics and thermodynamics of cationic dye adsorption onto dry and swollen hydrogels poly(acrylic acid-sodium acrylate-acrylamide) sodium humate	<b>Desalination and Water Treatment</b>  <b>I.F. 1.631</b>	International Taylor & Francis  ISSN 1944-3994 (Print), 1944-3986 (Online)	<b>Vol.53(13 ), 2015;DOI:</b> 10.1080/19443994.2013.871342;  pages 3668-3680  Citation:1	<b>7</b>
9	Regenerable Hydrogels Based on poly(acrylic acid-sodium acrylate-acrylamide) Modified by Sodium Humate for High Removal of Pb <sup>2+</sup> and Fe <sup>2+</sup> ions: Metal Adsorption Kinetics	<b>Desalination and Water Treatment</b>  <b>I.F. 1.631</b>	International Taylor & Francis	<b>Vol.52( 28-30), 2014;DOI:</b> 10.1080/19443994.2013.8	<b>2</b>

	and Thermodynamic Studies Tripti Singh, ReenaSinghal*		<b>ISSN</b> 1944-3994 (Print), 1944-3986 (Online)	08588;pages 5611-5628  Citation:1	
10.	A study on interaction and solubility of acetaminophen with poly (AM-co-HEA-co-AA) hydrogels by DSC: Effect on drug diffusion behavior  SeemaAwasthi and Reena Singhal	<b>Journal of Macromolecular Science, Part A: Pure and Applied Chemistry</b>	International Taylor & Francis  <b>ISSN</b> 1060-1325 (Print), 1520-5738 (Online)  <b>Publication Frequency</b> 12 issues per year	<b>Vol. 50;</b> Issue I, January <b>2013</b> , 72-89  Citation:1	<b>2</b>
11.	Poly (Acrylic acid / Acrylamide / Sodium Humate) superabsorbent hydrogels for metal ion/Dye adsorption: Effect of Sodium Humate concentration Tripti Singh and Reena Singhal	<b>Journal of Applied Polymer Science I.F 1.600</b>	International Wiley Interscience Online ISSN: 1097-4628	<b>Vol.125,</b> 1267–1283 <b>(2012)</b>  Citation:10	<b>24</b>
12.	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)  SeemaAwasthi, ReenaSinghal	<b>Journal of Macromolecular Science, Part A: Pure and Applied Chemistry</b>	International Taylor & Francis <b>ISSN</b> 1060-1325 (Print), 1520-5738 (Online)  <b>Publication Frequency</b> 12 issues per year	<b>Vol. 49,</b> No.5, 1–17, <b>(2012)</b>  Citation:2	<b>4</b>
13.	Synthesis and Characterization of Novel Poly(acrylamide-co-acrylic acid-co-2-hydroxy ethyl acrylate) Hydrogels: Mathematical Approach in investigation of Swelling Kinetics and Diffusion Models”	<b>Journal of Applied Polymer Science I.F 1.600</b>	International Wiley Interscience  Online ISSN: 1097-4628	<b>Vol.124:</b> 3, 2348-2361  <b>(2012)</b>  Citation:2	----

14	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	<b>International Journal of Polymeric Materials</b>	International Taylor & Francis	<b>Vol. 59</b> :1–20, (2010) Citation:14	<b>15</b>
15.	Effect of polysulfide modifier on mechanical and morphological properties of epoxy/ phthalic anhydride system; Arundhati Dubey, ReenaSinghal & A.K.Nagpal	<b>International Journal of Plastic Technology</b>	International Springer ISSN: 0972-656X (Print) 0975-072X (Online)	<b>Vol.13</b> , n0.2,193-204, (2010) Citation:-	<b>2</b>
16.	Influence of phenoxy modifier on mechanical, electrical and morphological properties of epoxy/DDS systemVarun Dixit &Arun K. Nagpal & ReenaSinghal,	<b>International Journal of Plastic Technology</b>	Springer International ISSN: 0972-656X (Print) 0975-072X (Online)	<b>Vol.14</b> , n0.1,38-52, (2010) Citation:-	----
17.	Effect of crosslinker and initiator concentration on the swelling behavior and network parameters of superabsorbent hydrogels based on acrylamide and acrylic acid””; Reena Singhal□, Rajiv Singh Tomar, A.K. Nagpal	<b>International Journal of Plastic Technology</b>	International Springer ISSN: 0972-656X (Print) 0975-072X (Online)	<b>VOL. 13(1)</b> 22-27, 2009 Citation:8	
18.	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	<b>Polymer Plastic and Technology and Engineering”</b>	International Taylor & Francis ISSN 0360-2559 (Print), 1525-6111 (Online) 17 Issues /yr	<b>Vol. 47</b> ,No.3, 223-21-14, 2008 Citation:12	

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20.	Synthesis and Characterization of solvent less Polyester Varnish based on DiCyclo Penta Diene (DCPD)"; Bilson Shukla ,Varun Dixit ,Reena Singhal and A.K.Nagpal .	<b>Polymer Plastic and Technology and Engineering</b>	International Taylor & Francis ISSN 0360-2559 (Print), 1525-6111 (Online) 17 Issues /yr	<b>Vol. 46:</b> 191-198 , <b>2007</b> Citation:1	
21.	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	<b>Polymer Plastic and Technology and Engineering</b>	International Taylor & Francis ISSN 0360-2559 (Print), 1525-6111 (Online) 17 Issues /yr	<b>Vol. 46: 1–8, 2007</b> Citation:-	
22.	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	<b>Journal of Macromolecular Science :Part A,Pure Applied Chemistry,</b>	International Taylor & Francis ISSN 1060-1325 (Print), 1520-5738 (Online) <b>Publication Frequency</b> 12 issues per year	<b>Vol. 44, No. 4,403-412, 2007</b> Citation:1	
23.	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 andA. K. Nagpal	<b>Designed Monomers and Polymers</b>	International VSP an imprint of Brill	<b>Vol.10 ,</b> No.1 , 49-66, (2007). Citation:9	
24.	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,	<b>Designed Monomers and Polymers</b>	International VSP an imprint of Brill	<b>Vol. 9, No. 6, 589–605, 2006</b> Citation:4	
25.	Synthesis of Poly (Acrylamide-LO-	<b>Designed</b>	International	<b>Vol. 9,</b>	

	Methyl Metha Acrylate) Chemically Crosslinked hydrogel and their application in controlled release of model drugs".T. Begum, A. K. Nagpal & Reena Singhal	<b>Monomers and Polymers</b>	VSP an imprint of Brill	No.5,477-490, <b>2006</b> Citation:-	
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28.	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	<b>Indian Journal of Chemical Technology ,</b>	International NISCAIR, India	<b>Vol.11,</b> 243-244, March <b>2004</b> Citation:2	
29.	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	<b>Designed Monomers and Polymers</b>	International VSP an imprint of Brill	<b>.7 4,311-330,</b> <b>2004.</b> Citation:3	
30.	Studies on Continous Glassfiber Reinforced Polyetherimide. Thermoplastic Composites". B. Singh. R. Singhal, R.K. Singh & A.K. Nagpal	<b>International Journal of Plastic Technonology</b>	International Springer	Aug <b>2004</b> Citation:-	
31.	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	<b>The Journal of Applied Polymer Science</b>	International Wiley Interscience Online ISSN: 1097-4628	<b>. 94,</b> No. 40-52, 15 Sep., <b>2004</b> Citation:-	

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33.	Study on Crosslinking Reaction of Epoxy Resin (DGEBA) by Anionically Polymerized Polycaprolactam: Part – I"; A. Gupta, R. Singhal and A.K. Nagpal	<b>The Journal of Applied Polymer Science</b>	International Wiley Interscience Online ISSN: 1097-4628	<b>Vol. 89</b> , 3237- 3247, <b>2003</b> Citation:-	
34.	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	<b>The Journal of Applied Polymer Science</b>	International Wiley Interscience Online ISSN: 1097-4628	<b>Vol. 89</b> , <b>2003</b> , 779-786 Citation:12	
35.	Study of Cure Kinetics of Polyacrylamide Hydrogels by Differential Scanning Calorimetry"; R. Singhal, S. Sachan & J.S.P. Rai	<b>Iranian Polymer Journal</b>	International Iran	<b>Vol. 11</b> , No. 3, <b>2002</b> , 143-149 Citation:5	
36.	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	<b>Material &amp; Manufacturing Processes</b>	International Taylor and Francis	<b>Vol.17</b> , (3), <b>2002</b> , 415-431 Citation:9	
37.	Study of Multilayer Matrices for Controlled Release of Drugs"; R. Singhal, A.K. Nagpal and G.N. Mathur	<b>Indian Journal of Chemical Technology</b>	International NISCAIR, India	<b>Vol. 8</b> , Sept <b>2001</b> , 396-401 Citation:-	
38.	Thermal Transitions and Morphological Behaviour of Polyether Ether Ketone and Liquid Crystalline Polymer Blends"; M. Goel, R. Singhal, L.D. Kandpal & A.K. Nagpal,	<b>Material and Manufacturing processes</b>	International Taylor and Francis	<b>Vol. 78</b> , 12, <b>2000</b> , 2089-2103	

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39.	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	<b>The Journal of Applied Polymer Science</b>	International Wiley Inter Science Online ISSN: 1097-4628	<b>Vol. 78, 12, 2000</b> 2104-2121 Citation:25	
40.	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	<b>J. Thermal Analysis &amp; Calorimetry</b>	International Springer	<b>Vol. 55, 1999</b> , 29-38 Citation:6	
41.	Curing and Rheological Behaviour of Vinyl Ester Resins Prepared in Presence of Tertiary Amines”; S. Agrawal, R. Singhal & J.S.P. Rai	<b>J. Macromolecular Sci. Pure &amp; Appl. Chemistry</b>	International Taylor & Francis ISSN 1060-1325 (Print), 1520-5738 (Online) <b>Publication Frequency</b> 12 issues per year	<b>Vol. 36, Issue 5-6, 1999</b> , 759-773 Citation:13	
42.	Controlled Release behavior of Ethyl Cellulose Matrices Part-I” Reena Jain, & G.N. Mathur	<b>J. of Polymer Materials</b>	International ISSN: 0973-8622 e-ISSN: 0976-3449	<b>Vol. 13, 1996</b> , 139-145. Citation:1	
43.	“Effect of Additives on Controlled Release properties of cast Ethyl Cellulose Matrices”	<b>J. of Polymer Materials</b>	International ISSN: 0973-8622 e-ISSN: 0976-3449	<b>Vol. 14, 1997</b> , 311-316. Citation:2	



**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**

**VIII a) INVITED LECTURES IN NATIONAL & INTERNATIONAL WORKSHOPS AND CONFERENCES**

- 1) Hydrogels And Their Nanocomposites As Polymeric Biomaterials delivered in one day **National Seminar on “Polymeric Smart & Nanomaterials Technology Concept & Future Applications** at CIPET, Lucknow on 4.10.2018
- 2) Green Chemistry delivered in one day **National Seminar on “Sustainable Development in Textiles ,"**at GCTI, Kanpur on 24.08.2018
- 3) Polymers and their Structural-Property Relationship and their Commercial production, delivered in FDP **on Fundamentals of Polymers and Polymerizations “,**at DMSRDE, Kanpur on 07.08.2018
- 4) "Hydrogels And Their Nanocomposites," For Medical Textiles & Biomaterials at GCTI, Kanpur in Faculty Development Program on 25..2017
- 5) National Conference on **Advances in Chemistry for Sustainable Development (ASCD-2017)** on March 22-23, 2017 Sponsored by TEQIP-II, World Bank) Organized by Department of Chemistry & Mechanical Engineering, H.B.Technical University, Kanpur 208002
- 6) **Hydrogels And Their Nanocomposites** For Medical Textiles & Biomaterials at GCTI, Kanpur in Faculty Development Program on August 2017
- 7) **Positive Attributes of Plastics** at Banaras in ;**Workshop On Plastic Waste Management organized by** CIPET , Lucknow on 16.12 2016
- 8) **Positive Attributes and Waste Management of Plastics** at Kanpur **organized by** CIPET , Lucknow on 11.03. 2016
- 9) 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 26-28Feb 2015
- 10) 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

- 11) Invited talk titled, “Polymeric Biomaterials: An overview” Reena Singhal Presented in **All India Seminar on Advance in Materials and Material Selection in Design, August 24-25<sup>th</sup> 2012** at HBTI Kanpur.
- 12) 9). Key note talk titled, “Naveen Biomedical स्मार्ट बहुलक आधारित नवीन बायोमेडिकल “उपयोगों के लिये बहुक्रियात्मक जलधारक जेल”, Reena Singhal, Seema Awasthi, Presented in **Hindi Sanghoshti** held on **12.12.12** at DMSRDE, Kanpur.
- 13) 10) Invited Talk in **TEQUIP Sponsored Faculty Development course** on Teaching Learning Process on ,”Importance of Practical’s and Tutorials “on 28.2.13 at H.B.T.I., Kanpur.
- 14) 11) 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.

**RESEARCH PAPERS PRESENTED IN NATIONAL & INTERNATIONAL**

**CONFERENCES:**

- 1) A Study of Adsorption Kinetics using Langmuir Isotherms for Heavy Metal Cu<sup>2+</sup> ion and MB dye from Novel Poly (AAc-NaAlg-SH) superabsorbent hydrogels at **International Conference on Modeling of Environment & Water Resource Systems on date 26 march 2017.**
- 2) 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.
- 3) “Mathematical approach for Effect of non-ionic content on Controlled Drug Diffusion from Smart Hydrogels based on Poly(AM-co-HEA-co-AA)”, ReenaSinghal, SeemaAwasthi; Presented, ”**Polymers on the Frontiers of Science and Technology**”;**International Conference** organized by Punjab Univ. & APA on Feb21-23 ,2013 at Chandigarh.
- 4) “Development of Solid Adsorbant based on Bio-polymer and Polymeric Hydrogels for absorption for heavy metal ions and dyes from industrial waste water”, ReenaSinghal, Deepa Gupta, Presented in **All India Seminar on Advance in Materials and Material Selection in Design, August 24-25<sup>th</sup> 2012** at HBTI 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 meth acrylate.” Reena Singhal; **Advances in Materials & Material Selection in Design (AMMSD-2012)** H.B.T.I, Kanpur
- 6) “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 20-232012**, New Delhi jointly organized by APA.

- 7) 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.**
- 8) “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 83<sup>rd</sup> ACS Colloid and surface Science Symposium** held on **14-19<sup>th</sup> June 2009** at Columbia University, N.Y., New York , U.S.A.
- 9) “Development 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)** 17-20<sup>th</sup> December 2009, held at IIT Delhi.
- 10) Seema Awasthi, Reena Singhal ”Environment Sensitive Hydrogels: New challenges and applications” presented in **Hindi Sanghosti on Material Science** held at DMSRDE, Kanpur on **13-14<sup>th</sup> Feb 2008.**
- 11) 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 ,”**82<sup>nd</sup> ACS Symposium on Colloid & Surface Science,**” held at North Carolina State University,Raleigh on **15-18 june 2008 in U.S.A.**
- 12) 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.**
- 13) 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.**

- 14) 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**
- 15) 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**
- 16) 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**.
- 17) “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.***
- 18) “ 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.
- 19) “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
- 20) “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 .
- 21) “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***

- 22) "Novel Application of Epoxy /Phenoxy blends in Composites", V.Dixit ,B.Shukla , A.K.Nagpal & R.Singhal; presented in *Intenational Conference on "Recent Advances in Composite Materials,"* held at I.I.T.,BHU, ON 17-19 Dec.2004
- 23) "Synthesis of Physically Crosslinked modified Polyacrylamide based Copolymeric Hydrogels and Study of it's Interaction with Acetaminophen" *International Conference , "POLYMER NETWORKS-2004"* held on Aug.15-19,2004, at NIH,Washington DC ,Bethesda,MD,USA.
- 24) 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.
- 25) Scanning Electron Microscopy of Gamma Radiation Processed Mango Wood Polymer Composites. S.K. Gupta, N.K. Gupta, R. Singhal and A.K. Nagpal, "*Electron Mircscopy and Allied Fields*", at National Physical Laboratory-New Delhi April 1-3, 2004;
- 26) 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 Mircscopy and Allied Fields*", at National Physical Laboratory-New Delhi April 1-3, 2004;
- 27) "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.
- 28) "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 26<sup>th</sup> Annual Conference on "*Frontiers of Electron Microscopy and Allied fields*" held at CPRI, Shimla on 16-18 April, 2003.

- 29) "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 26<sup>th</sup> Annual conference on "*Frontiers of Electron Microscopy and Allied Fields*" held at CPRI, Shimla on 16-18 April, 2003.
- 30) 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.
- 31) "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. 32 to 41 were presented in National Seminar on "*Recent Development of Polymers*" **POLYCON-2002** held at H.B.T.I. Kanpur on 16-17 Aug. 2002.

- 32) "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.
- 33) "Gamma Radiation Technology : The Future is Today" P.K. Jain, R. Singhal A.K. Jain and A.K. Nagpal.
- 34) "Benefits of Super Absorbent Polymers". R.S. Tomar, R. Singhal and A.K. Nagpal.
- 35) "Fungal Decay Resistance of Rubber Wood-Polymer Composites processed by Gamma Radiation" S.K. Gupta, N.K. Gupta, R. Singhal and A.K. Nagpal.
- 36) "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.
- 37) "Synthesis Characterization of Copolymer based Acrylamide and Methylmethacrylate and its Vinylamine group containing Derivative". T. Begam R. Singhal and A.K. Nagpal
- 38) "Environment Sensitive Hydrogels" I. Gupta A.K. Nagpal and R. Singhal.
- 39) "New Developments in Solvent less Polymer Varnishes" B. Shukla R. Singhal, P.K. Singh and A.K. Nagpal.
- 40) "Synthesis and Optimization of Reactive Blends Based on Diglycidyl ether of Bisphenol A (DGEBA) and Polycaprolactam". A Gupta. R. Singhal and A.K. Nagpal.



- 41) "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.
- 42) "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**.
- 43) "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 **25<sup>th</sup> Annual Conference of the Electron Microscope Society** held at IIT, Bombay on 19-22 Feb. **2002**.
- 44) "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, **2003**
- 45) "Modification of polymeric chains of selenium on alloying with Tellurium : 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**.
- 46) "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**.
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