

## Curriculum Vitae PI

### **Dr. Humaira Masood Siddiqi**

Professor  
Department of Chemistry  
Quaid-I-Azam University  
Islamabad Pakistan

**Field of Specialization**                      Polymers

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### Educational Qualifications

**Ph.D.**, *June 1997*, **Grade Highly appreciable**, Institut National des Sciences Appliquees de Lyon France

**M.Phil.**, *June 1993*, **GPA 4.1 1<sup>st</sup> Div.**, Quaid-I-Azam University Islamabad Pakistan

**M.Sc.**, *Dec. 1990*, **GPA 3.8, 1<sup>st</sup> Div.**, Quaid-I-Azam University Islamabad Pakistan

**B.Sc.**, *1988*, **Grade B, 1<sup>st</sup> Div.**, Govt. College for Women 6<sup>th</sup> Road RP. Pakistan

**F.Sc.**, *1986*, **Grade B, 1<sup>st</sup> Div.**, Govt. College for Women 6<sup>th</sup> Road RP. Pakistan

**Matric**, *1984*, **Grade A 1<sup>st</sup> Div.**, F.G Girls High School Misrial Road RP. Pakistan

### Languages

Urdu,

English

French: 4months certificate course from N.I.M.L H-9 Islamabad

3 months course from C.E.U.F Greonble France

Diploma in DELF 1<sup>st</sup> degree from Academie de Lyon France

Diploma in DELF 2<sup>nd</sup> degree from Academie de Lyon France

### Computer Knowledge

Working knowledge of different softwares in Window environment.(MS Word, Excel, Chemwin, Visio, Power Point).

### Distinctions & Scholarships

- 2<sup>nd</sup> position in school in Matric Board Exams 1984.
- 1<sup>st</sup> position in Physics in college during F.Sc 1984-86.

- 1<sup>st</sup> position in Islamic studies during B.Sc. 1986-88
- 3<sup>rd</sup> position in Aggregate in B.Sc 1986-88.
- 1<sup>st</sup> position in College in B.Sc. University Exams 1988.
- President's Talent forming scheme scholarship UGC in M.Sc for 2 years.
- University merit scholarship in M.Phil for 2years.
- Science and technology Scholarship from Ministry of Science and Technology Pakistan (1993-97) for Ph.D. for 4 years.

### **Courses taught**

1. Biochemistry
2. Reaction Mechanism I
3. Organic synthesis
4. Natural products
5. Special topics in Organic chemistry
6. Modern trends in organic synthesis
7. Special organic reactions
8. Name reaction
9. Chemistry of Heterocycles
10. Organic polymer Chemistry
11. Organic Chemistry Laboratory I
12. Organic Chemistry Laboratory II
13. Organic chemistry practicals 3<sup>rd</sup> sem M.Sc.
14. Advanced Organic Chemistry Practicals

### **Supervision**

**M. Phil:** 24, four in progress

**Ph.D.:** Three completed, 8 in progress

### **Research Projects of interest**

1. Synthesis and characterization of liquid crystal molecules.
2. Synthesis and characterization of polymers and their Composite materials (epoxy amine based organic/inorganic hybrid Nanocomposites, biodegradable composites, and Polymer dispersed liquid crystals).

### **Funded Research Projects**

No.	Title	Donor Agency	Amount (Rs./)	From	To	Role as
1.	Synthesis and Characterization some liquid crystalline molecules	URF Project for the Department of Chemistry	110,000/	1999	2000	PI

2.	Synthesis and characterization of some modified epoxy oligomers	URF Project for the Department of Chemistry	75,000/	2000	2001	PI
3.	Synthesis and characterization of some liquid crystalline molecules	PSF	6,16,945	2001	2003	Co-PI
4.	Synthesis and Characterisation of some epoxy based interpenetrating (O-I) hybrid polymer materials	URF project for the Department of Chemistry	24,000/	2003	2004	PI
5.	Synthesis of some novel ferrocene based mono and difunctional amines and their reaction with epoxy resin	URF Project for the Department of Chemistry	40,000/	2004	2005	PI
6.	Synthesis and Characterisation of some novel ferrocne containing materials	HEC	Rs.1587,000/	2003	2006	Co-PI
7.	Synthesis and characterization of some ferrocenylamines, their benzene analogues and their reaction with commercial epoxy resins.	URF Project for the Department of Chemistry	Rs.75,000/	2005	2006	PI
8.	Synthesis and characterization of novel high temperature resistant materials	HEC	3,733,000	2007	2010	Co-PI
9	Synthesis and characterization of novel epoxy amine polymers	HEC	Rs.6,525,960	2007	2010	PI
10	Synthesis and characterization of some p-alkoxy substituted diester derivatives of dihydroxyazoxybenzene	URF	67900/	2010-	2011	PI
11	Super-Toughened elastomeric coatings: Role of metal oxide nanoparticles in property enhancement	HEC	3723247/-	2010	2012	PI
12	Synthesis and characterization of p-		47538/	2011	2012	PI

	Allyloxy substituted bis-benzamides by using different commercial and synthesized diamines as potential monomers for polymerization reactions					
13	Synthesis and physicochemical studies of some ferrocene based conducting materials and their organic analogues (20-2154/NRPU/R&D/HEC/12-3698	HEC	15,266,480	2012	2015	Co-PI
14	Synthesis and characterization of sulfone containing diamines and their polymers	URF deptt of chemistry	44882/-	2012	2013	PI
15	Design and synthesis of long alkyl chain based organometal p-erovskites and their photocatalytic activity	URF deptt of chemistry	60000/-	2014-	2015	PI
16	Computer guided design and synthesis of IL-2 inhibitors as immunomodulating agents (Granted to originally to Prof.Dr.Farzana Latif Ansari but transferred to me for the last year only due to the retirement of PI	HEC	3585295/-	2010	2014	PI for the last year only due to retirement of previous PI

### M.phil thesis Supervision

S.No	Student's Name	Thesis title	Year
1	Tanzeela Nazir	Synthesis and characterization of some epoxy based interpenetrating organic-inorganic hybrid materials	2001
2	Malik Mohammed Qasim	Synthesis and characterization of some liquid crystalline molecules	2002
3	Adeel Afzal	Synthesis and characterization of some epoxy based interpenetrating O-I hybrid materials using "GPTMS" as the coupling agent	2004
4	Naila Khalid	Synthesis and characterization of ferrocene based amines organic diamines and their curing behaviour with epoxy resin	2005

5	Samia Sajid	Synthesis and characterization of some aromatic amines and their reaction with the commercial epoxy resins	2006
6	Tabinda Fatima	Synthesis and characterization of some liquid crystalline Schiff base derivatives	2007
7	Toheed akhtar Shahbaz	Synthesis and characterization of some epoxy-polyimide composites	2007
8	Saqiba Sherazi	Synthesis and characterization of some epoxy based composites	2007
9	Inshad Khan	Synthesis and characterization of some new epoxy-polyimide composites	2007
10	Gulnaz bibi	Synthesis and characterization of some new oligomers and polymers of epoxy	2008
11	Sumaira Shahzadi	Synthesis and characterization of some mesogenic azoxybenzene derivatives	2009
12	Amna Siraj	Synthesis and characterization of some new tetraglycidyl amines and their polymers	2009
13	Uzma Bibi	Synthesis and characterization of some aromatic derivatives of 4,4'-Dihydroxyazoxybenzene as potential mesomorphic &/or biologically active molecules.	2009
14	Zakya Rubab	Synthesis and characterization of epoxyamine-titania composites	2010
15	Maria Shakeel	Synthesis and characterization of some diamines and their applications to epoxy resins	2011
16	Neelum Hafiz	Synthesis and characterization of new polyesters containing azomethine groups	2011
17	Asma Iqbal	Synthesis and characterization of some rigid rod like molecules as potential liquid crystals	2011
18	Mahwash Atta	Synthesis and characterization of epoxy-amine – titania composites using glycidoxypropyltrimethoxy silane as a coupling agent	2011
19	Aneela Tabassum	Synthesis and characterization of some multifunctional molecules	2012
20	Tehmina Naz	Synthesis and characterization of epoxy-ZnO nanocomposites	2012
21.	Qaiser Mahmood	Synthesis and characterization of metal oxide nanoparticles and their nanocomposites	
22.	Muhammed Muhammed Faheem	Synthesis and Characterization of ZnO nanoparticles and epoxy based nanocomposites derived thereof	2012
23	Faiza Rehman	Synthesis and characterization of derivatives of p-Nitrophenol	2013

24	Madiha Tariq	Synthesis and characterization of some allylic monomers for free radical polymerization	2013
25	Shaista Shamim	Synthesis and characterization of some highper branched polymers	2014
26	Zil e Huma	Synthesis and characterization of some new diamine and their polyimides with improved thermal properties	2014
27	Ayesha Siddiqua	Synthesis and characterization of ether based multifunctional amines as precursors for hyperbranched polymers	2015
28	Hina Abbas	Synthesis and characterization of some new polyimides having amide pendant groups	2015
29	Aaliya Manzoor	Synthesis and characterization of tribenzamides having symmetrical flexible and/or rigid moieties	2015
30	Iqra Gilani	Synthesis and characterization and curing study of some aromatic diamines with epoxy oligomers	2015

**M.Phil. students currently under supervision: Total Number: 4**

#### **Co-Supervision of M.Phil students from other Universities/Institutes**

S.No.	Title		Year
1.	Synthesis and characterization of organic-inorganic hybrid containing deifferent percent of metal oxide from epoxy and curing agent	Noor Ul Amin Hazara Univ KPK	2013
2.	Synthesis and characterization of hybrids metal oxide nanoparticles and their composites with epoxy and curing agent	Farmana Ayaz Hazara Univ KPK	2013

#### **Ph.D Supervision**

S.No.	Title	Name of Student	Year
1.	Synthesis and characterization of Polyethylene composites based on Polysaccharides	Sadullah Mir (As Supervisor)	2011
2.	Synthesis of different classes of flavonoids, their thio and imino derivatives having potential biological and industrial	Lubna Rashid (As Co--supervisor)	2011

	applications		
3.	Synthesis and Characterization of compatibilized Polyimide-silica composites	Toheed Akhter (Supervisor)	2013
4.	Synthesis and Characterization of Sulfone based high performance Polymers	Ghulam Waris (Supervisor)	2014
5.	Synthesis, Characterization and development of some new epoxy polymers and their composites	M.Fida ul Mustafa (Supervisor)	2015

**PhD students under Current supervision: 9**

### **List of Research Publications**

1. “Liquid phase synthesis of aromatic poly(azomethine)s, their physicochemical properties, and measurement of *ex situ* electrical conductivity of pelletized powdered samples”, Abdul Hafeez, Zareen Akhter, John F. Gallagher & Humaira M. Siddiqi, *Designed Monomers and Polymers* (2016), Vol. 20, no 1, 74–88.
2. “6-Hydroxyhexyl 4-(E)-4-alkoxy/halostyryl) benzoates: synthesis, characterisation and study of mesomorphic and fluorescent properties”, K Muhammad, S Hameed, HM Siddiqi, J Eccher, IH Bechtold, **Liquid Crystals** (2016), 1-15.
3. “Enhancement of ‘dry’ proton conductivity by self-assembled nanochannels in all-solid polyelectrolytes”, Azhar Hussain Shah, Jiaye Li, Hengrui Yang, Usman Ali Rana, Vijayaraghavan Ranganathan, Humaira M. Siddiqi, Douglas R. MacFarlane, Maria Forsyth, and Haijin Zhu DOI: 10.1039/b000000x, **Journal of Materials Chemistry A**, (2016).
4. “Synthesis and characterization of blue light emitting redox-active polyimides bearing noncoplanar fused carbazole-triphenylamine unit”, Asma Iqbal, Seok Hwan Leeb, O OK Parkb, Humaira M Siddiqi, and Toheed Akhter, DOI: 10.1039/C6NJ00702C, **New Journal of Chemistry** (2016).
5. “The effect of even-odd methylene spacer groups on the thermal stability of epoxy-amine polymers”, Maria Shakeel, Toheed Akhter, Humaira Masood Siddiqi, Zareen Akhter, **Journal of Chemical Society of Pakistan**, (2015), Vol. 37, No. 1, p no.92 .
6. “Enhancing the dielectric properties of highly compatible new polyimide/ $\gamma$ -ray irradiated MWCNT nanocomposites”, Toheed Akhter, Sung Cik Mun, Shaukat Saeed, O. Ok Park and Humaira Masood Siddiqi, **RSC Adv.**, (2015), **5**, 71183-71189
7. “Multi-Segment Poly(azomethine)esters: Synthesis, Characterization and Thermal Studies”, Neelum Hafeez, Humaira Masood Siddiqi\*, Sabah Zaman, Asghari Gul,

- Zareen Akhter, **Journal of Chemical Society of Pakistan** (2015) Vol 37, No.03, p-484.
8. 2-Aminoethanol-mediated wet chemical synthesis of ZnO nanostructures T Naz, A Afzal, HM Siddiqi, J Akhtar, A Habib, M Banski, A Podhorodecki **Applied Nanoscience** (2015) 5 (4), 425-433.
  9. Pyridine-Thiourea Based High Performance Polymers: Synthesis and Characterization, Ghulam Waris, Humaira Masood Siddiqi, **Chinese Journal of Polymer Science.**, (2015) Vol.33 No.1 1-12.
  10. Development of novel coatable compatibilized polyimide-modified silica nanocomposites, T Akhter, HM Siddiqi, S Saeed, OO Park, SC Mun., **Journal of Polymer Research** (2014) 21 (5), 1-10.
  11. An investigation of physico-chemical properties of a new polyimide–silica composites T Akhter, OO Park, HM Siddiqi, S Saeed, KM Saoud **RSC Advances** (2014) 4 (87), 46587-46594.
  12. Synthesis and characterization of novel coatable polyimide-silica nanocomposites, T Akhter, S Saeed, HM Siddiqi, OO Park, G Ali, DOI: 10.1007/s10965-013-0332-0, **Journal of Polymer Research**, (2014) Vol. 21, Number 1, January, pp. 1-11.
  13. "Augmenting Thermal and Mechanical Properties of Epoxy Thermosets: The Role of Thermally Treated vs. Surface C Modified TiO<sub>2</sub> Nanoparticles", Zakya Rubab, Adeel Afzal, Humaira M. Siddiqi, Shaukat Saeed, **Materials express**, (2014), Vol. 4, pp. 54-64.
  14. "Preparation, characterization, and enhanced thermal and mechanical properties of epoxy-titania composites", Zakya Rubab, Adeel Afzal, Humaira M. Siddiqi, Shaukat Saeed, **The Scientific World Journal**, (2014), Volume 2014, Article ID 515739, 7 pages
  15. "Curing behavior and thermal properties of TGDDM copolymerized with a new pyridine-containing diamine and with DDM or DDS", Muhammed Fida-ul- Mustafa, Wayne. D. Cook, Tara. L. Schiller, Humaira. M. Siddiqi, DOI: 10.1016/j.tca.2013.09.018. **Thermochimica Acta** (2014), Volume 575, pp. 21-28.
  16. "Synthesis, Characterization and Biological Evaluation of Novel Diesters of 4,4'-Dihydroxy Azoxy Benzene with Long Chain Carboxylic Acids", Sumaira Shehzadi, Humaira Masood Siddiqi, Malik Mohammed Qasim, Musfirah Fawad, Abdul Manan, Naeema Khan, Samreen Saleem, Farah Bashir and Bushra Mirza", **Journal of the Chemical Society of Pakistan**, (2014), Volume 36, No. 5, October.
  17. "Novel flame retardant poly(thiourea-sulfone-imide)s for high temperature applications: synthesis and characterization" Ghulam Waris, Humaira M.Siddiqi, Rizwan Hussain, M.Saeed Butt, Zareen Akhter, **Turkish Journal of Chemistry**, (2013), Vol. 37, pp. 946 -958.
  18. Preparation, characterization, and enhanced thermal and mechanical properties of epoxy-titania composites, Zakya Rubab, Adeel Afzal, Humaira M. Siddiqi, and Shaukat Saeed. **The Scientific World Journal**, (2014), 5 :515739
  19. N-(4-Hydroxyphenyl)-4-nitrobenzamide G Waris, HM Siddiqi, U Flörke, S Saeed, MS Butt **Acta Crystallographica Section E: Structure Reports** (2013) Online 69 (4), o526-o526



20. "Sol gel synthesis of tetragonal ZrO<sub>2</sub> nanoparticles stabilized by crystallite size and oxygen vacancies", Qaiser Mehmood, Adeel Afzal, Humaira Masood Siddiqi, Amir Habib, **Journal of sol-gel. Science & Technology**, DOI 10.1007/s10971-013-3112-8, (2013), Vol. 67, pp. 670-674.
21. "N,N'-Bis(4-bromophenyl)pyridine-2,6-dicarboxamide", Ghulam Waris, Humaira Masood Siddiqi, Ulrich Flo'rke, Rizwan Hussain and M. Saeed Butt DOI:10.1107/S1600536813002705, **Acta Cryst.** (2013). E 69, 0.
22. 4-Nitrophenyl 2-chlorobenzoate Asma Iqbal, Toheed Akhter, Humaira Masood Siddiqi, **Acta Cryst.**, (2013), E69, o96.
23. Exploring resin viscosity effects in solventless processing of nano-SiO<sub>2</sub>/epoxy polymer hybrids Adeel Afzal, Humaira Masood Siddiqi, Shaukat Saeed and Zahoor Ahmad, **RSC, Advances**, DOI: 10.1039/c3ra21150a, (2013), Vol. 3, pp. 3885-3892.
24. Synthesis and characterization of processable aromatic polyimides and their initial evaluation as promising biomaterials", Ghulam Waris, Humaira Masood Siddiqi, Michael Bolte, Rizwan Hussain and Zareen Akhtar", **Colloids and polymer science**, DOI.10.1007/s00396-013-2892-2, (2013) Vol. 291, pp. 1581-1593.
25. The effect of SiO<sub>2</sub> filler content and its organic compatibility on thermal stability of epoxy resin, Adeel Afzal, Humaira M. Siddiqi, Naseer Iqbal, Zahoor Ahmad, **Journal of Thermal Analysis and Calorimetry**, DOI 10.1007/s10973-012-2267-9, (2013), Vol. 111, pp. 247-252
26. "Synthesis, characterization, biological evaluation and QSAR of some Schiff base esters: Promising new antitumor, antioxidant and anti-inflammatory agents", Asma Noureen, Samreen Saleem, Tabinda Fatima, Humaira Masood Siddiqi and Bushra Mirza, **Pakistan Journal of Pharmaceutical Sciences**, (2013), Vol. 26, pp. 113-124.
27. "Thermal and Rheological Effects of Sepiolite in Linear Low-Density Polyethylene/Starch Blend", Sadullah Mir, Tariq Yasin, Peter J. Halley, Humaira Masood Siddiqi, Orhan Ozdemi, Anh Nguyen, **Journal of Applied Polymer Science**, (2013), Vol. 127, pp. 1330-1337.
28. "Synthesis and characterization and thermal oxidative stability of rigid epoxy polymers cured from aromatic mono- and di-diamine, Humaira Masood siddiqi, Adeel Afzal, Samia Sajid, Zareen Akhter, **Journal of Polymer Research**, DOI 10.1007/s10965-012-0041-0, (2013), Vol. 20, pp. 41.
29. "Preparation and characterization of novel polyimide-silica hybrids", Toheed Akhter, Shaukat Saeed, Humaira M.Siddiqi, OoK Park. **Polymers for Advanced Technologies**, (2012), Vol. 24, pp. 407-414.
30. "Triethylammonium 4-(3,5-dinitrobenzamido)-N-(3,5-dinitrobenzoyl)benzenesulfonamidate", Ghulam Waris, Humaira Masood Siddiqi, Ulrich Flo'rke, Rizwan Hussain and M. Saeed Butt, **Acta Cryst.** (2013). E69, o97.
31. "N-(4-Chlorophenyl)-4-nitrobenzamide", Ghulam Waris, Humaira Masood Siddiqi, Ulrich Fl 'orke, M.Saeed Butt and Rizwan Hussain, **Acta Cryst.** (2012). E68, o2768.
32. "Study on the preparation and properties of novel block copolymeric materials based on structurally modified organometallic as well as organic polyamides and polydimethylsiloxane", Muhammad Saif Ullah Khan, Zareen Akhter, Touseef Naz, Arshad Saleem Bhatti, Humaira M Siddiqi, Mohammad Siddiq and Abbas Khan, **Polymer International**, (2012), Vol. 62, pp. 319-334.

33. "Synthesis, Physicochemical Studies and Potential Applications of High-molecular-weight Ferrocene-based Poly(azomethine)ester and its Soluble Terpolymers", Asghari Gul, Zareen Akhter, Arshad Bhatti, Muhammed Siddiqi, Abbas Khan, Humaira M. Siddiqi, Naveed Kauser Janjua, Amber Shaheen, Sehrish Sarfraz, Bushra Mirza, **Journal of Organometallic Chemistry**, (2012), Vol. 719, pp. 41–53.
34. "4-Phenethoxyaniline hemihydrates", Toheed Akhter, Humaira Masood Siddiqi, Zareen Akhter and Vickie McKee, **Acta Crystallographica**, (2012), E68, pp. o1912.
35. "Synthesis, characterization and liquid crystalline behavior of some Schiff base esters Tabinda Fatima, Humaira Masood Siddiqi, M. M. Qasim, José Antonio Reina Lozano and Naeema Khan, **Journal of chemical society of Pakistan**, (2012), Vol. 34, No. 6.
36. "AFM substantiation of the fracture behavior and mechanical properties of sol-gel derived silica packed epoxy networks." Adeel Afzal, Humaira M. Siddiqi, Adnan Mujahid, Shaukat Saeed, **Journal of Sol-Gel Science and Technology**, (2012), Vol. 61, pp 44-48.
37. "Synthesis, spectroscopic studies and crystal structure of 1, 2-bis(4-nitro benzoyloxy) ethane", M. S. U. Khan, M. Bolte, Zareen Akhter, H. M. Siddiqi, **Journal of Chemical Crystallography**, (2011), Vol. 41, pp. 1180-1184.
38. "The Influence of Epoxy Functionalized Silica Nanoparticles on Stress Dispersion and Crack Resistance in Epoxy-Based Hybrids", Adeel Afzal, Humaira Masood Siddiqi, Shaukat Saeed, and Zahoor Ahmad **Material Express**, (2011), Vol. 1, pp. 299-306,
39. "The influence of temperature and interface strength on the microstructure and performance of sol-gel silica-epoxy nanocomposites", T. Nazir, A. Afzal, H. M. Siddiqi, S. Saeed, M. Dumon, **Polymer Bulletin**, (2011), Vol. 67, pp. 1539-1551.
40. "Synthesis and characterization of some polyimide-epoxy composites", Toheed Akhter, Humaira Masood Siddiqi, Zareen Akhter, M. Saeed Butt, **e-Polymers**, (2011), No. 022.
41. "4-(4-Nitrophenoxy)butanol" Zareen Akhter, Vickie McKee, M. S. U. Khan, Bushra Iftikhar, Humaira M. Siddiqi, **Acta Crysta**, (2011), E67, o800,.
42. "A Comprehensive study of the bicontinuous epoxy-silica hybrid polymers: I. Synthesis, characterization and glass transition", Adeel Afzal, H. M. Siddiqi, **Polymer**, (2011), Vol. 52, pp. 1345-1355.
43. "Synthesis and Thermal Studies of Some Epoxy Systems cured with Aromatic Diamines", Naila Khalid, Muhammad Saif Ullah Khan, Humaira Masood Siddiqi, Zareen Akhter and Naseer Iqbal, **Journal of chemical society of Pakistan**, (2011), Vol. 33, pp. 570-577.
44. "Thermal, rheological, mechanical and morphological behavior of HDPE/chitosan blend", Sadullah Mir, Tariq Yasin, Peter J. Halley, Humaira Masood Siddiqi, Timothy Nicholson, **Carbohydrate Polymer** (2011), Vol. 83, pp. 414-421.
45. "Synthesis, Characterization of Polyimide-Epoxy hybrid Films", M. Saeed Butt, Zareen Akhter, M. Zaffar-uz-Zaman, Humaira M. Siddiqi, M. Shoaib, **Journal of Chemical Society of Pakistan**, (2011), Vol. 33, pp. 43-48.

46. "Thermally and mechanically superior hybrid epoxy–silica polymer films via sol–gel method", Tanzeela Nazir, Adeel Afzal, Humaira M. Siddiqi,, Zahoor Ahmad, Michel Dumon, **Progress in Org. Coatings**, (2010), Vol. 69, pp.100-106.
47. "1,10-Bis(4-nitrophenoxy)decane", Toheed Akhter, Humaira M.Siddiqi, Zareen Akhter and Michel Bolte, **Acta Cryst.** (2010), E66, o529.
48. "4-Nitrophenyl 1-naphthoate", Uzma Bibi, Humaira M. Siddiqi, Zareen Akhter and Michael Bolte, **Acta Crysta** (2010), E66, o1023.
49. "4-Nitrophenyl 2-methylbenzoate", Uzma Bibi, Humaira M. Siddiqi, Michael Bolte and Zareen Akhter, **Acta Crysta**, (2009), E65, o3038.
50. "2-{5-[2-(4-Nitrophenoxy)phenyl]-1-phenyl-1H-pyrazol-3-yl}phenol", Ali Haider Zareen Akhter, , M.Bolte, Mohammad Zia ul Haq, and Humaira M.Siddiqi, **Acta Crysta**, (2010), E66, o787.
51. "4-Methylbenzyl-4-aminobenzoate", Ali Haider Zareen Akhter, Mohammad SaifUllah Khan, M. Bolte and Humaira M. Siddiqi, **Acta Crysta**, (2010), E66, o736.
52. "Crystal and molecular structure of 4-Aminobenzohydrazide", Ali Haider Zareen Akhter, Humaira M.Siddiqi, Edward R.T. Tiekink, **Journal of Chemical crystallography**, (2010), Vol. 40, pp. 397–401.
53. "Synthesis and characterization of some aromatic polyimides", M. Saeed Butt , Zareen Akhter , Michael Bolte , Humaira Masood Siddiqi , Haq Nawaz, M. Zafar-uz-Zaman, **Journal of Applied Polymer Science**, (2009), Vol.114, pp. 2101-2108.
54. Synthesis and characterization of some novel thermally stable poly(amide–imide)s, Muhammad Ali Mohsin, Zareen Akhter, Michael Bolte, M. Saeed Butt, Muhammad Saifullah Khan and Humaira M. Siddiqi, **Journal of Materials Science** (2009), Vol. 44, pp. 4796-4805.
55. 6-(4-Nitrophenoxy) hexanol , Muhammad Saifullah Khan, Zareen Akhter, Micheal Bolte, Sajjad A. Cheema and Humaira M.Siddiqi, **Acta Crysta**, (2009), o1285, E65.
56. "4,4'\_[4,4'-(Perfluoropropane-2,2-diyl)bis(4,1-phenyleneoxy)]Dianiline", Haq Nawaz, Zareen Akhter, Michael Bolte and Humaira M. Siddiqi, **Acta Crysta.**, (2009), E65, o1460
57. "Synthesis and biological evaluations of some Schiff base esters of ferrocenyl aniline and simple aniline", H. Nawaz, Z. Akhter, S. Yameen, H. M. Siddiqi, B. Mirza, A. Rifat, **Journal of Organometalli Chemistry**, (2009), Vol. 694, pp. 2198-2203.
58. "4,4'-(Hexane-1,6-diyl)oxydianiline", M. S. Khan, Z. Akhter, M. Bolte, M. S. Butt, A. Siraj, H. M. Siddiqi, **Acta Crysta.**, (2009), E65, o1096.
59. "1,5-Bis(4-nitrophenoxy)pentane", M. S. Khan, Z. Akhter, M. Bolte, M. S. Butt, H. M. Siddiqi, **Acta Crysta**, (2009), E65, O946.
60. "4-(4-Nitrophenoxy)biphenyl", Z. Akhter, T. Akhter, M. Bolte, M. A. Baig, H. M. Siddiqi, **Acta Crysta.**, (2009), E65, O710.
61. "*N*-(3-Nitrobenzylidene)aniline", Muhammad Zaheer, Zareen Akhter, Michael Bolte and Humaira M. Siddiqi, **Acta Crysta.**, (2008), E64, o2381–o2382.
62. *N*-[4-(4-Nitrophenoxy)phenyl]-propionamide" Asifa Nigar, Zareen Akhter, Michael Bolte, Humaira M. Siddiqi and Rizwan Hussain, "**Acta Crysta.**, (2008), Vol. 64, o2186.
63. Synthesis and characterization of some Schiff base containing polyimides", M. S. Butt, Z. Akhtar, M. Z. Zaman, H. M. Siddiqi", **Colloid and Polymer Science**, (2008), Vol. 286, pp. 1455-1461.

64. "1,1,1,3,3,3-Hexafluoro-2,2-bis[4-(4-nitrophenoxy)phenyl]propane", H. Nawaz, Z. Akhtar, M. Bolte, H. M. Siddiqi", **Acta Crysta**, (2008), E64, o1537.
65. 1,4-Bis(4-aminophenoxy)ethane, **Acta Crysta** M.Saeed Butt, Zareen Akhter, Michael Bolte and Humaira M.Siddiqi. E64, o1122, 2008.
66. "1,4-Bis(4-aminophenoxy)benzene" [Shemsi, A. M.](#), [Butt, S. M.](#), [Fettouhi, M.](#), [Siddiqi, H. M.](#), [Akhter, Z.](#), **Acta Crysta.**, (2008), Vol. 64, pp. o581.
67. "Synthesis, Structure and Characterization of Some Schiff bases bearing phenylferrocene", M. Faizullah, Zareen Akhter, Humaira Masood Siddiqi, Masood Pervez, **Applied Organometallic Chemistry**, (2007), Vol. 21, pp. 758-762.
68. "Synthesis and Physico-analytical Studies of some novel Ferroceny Schiff Base Derivatives", Muhammad Y. Razzaq, Zareen Akhter, Asifa Nigar and Humaira M. Siddiqi, **Journal of Organometallic Chemistry**, (2007), [Vol. 692](#), pp. 3542-3546.
69. "**1,4-Bis(4-amino-phen-oxy)butane**" [Naz, T.](#), [Akhter, Z.](#), [Bolte, M.](#), [Siddiqi, H. M.](#) **Acta Crysta.**, (2007), Vol. 63, pp. o3777, 2007.
70. "4,4'-Bis(4-nitrophenoxy)biphenyl" Samia Sajid, Zareen Akhtar, Michael Bolte and Humaira M.Siddiqi, **Acta Crysta.**, (2007), Vol. E63, pp. o1710-o1711.
71. "A new triclinic polymorph of 4-n-hexyloxybenzoic acid", Uzma Nazir, Akhtar Zareen, Michael Bolte and Humaira M.Siddiqi., **Acta Crysta.**, (2007), Vol. E63, pp. o12-o14.
72. "5,7-Diiodoquinolin-8-ol", M. S. Butt, Z. Akhter, M. Bolte, H. M. Siddiqi, **Acta Crysta.**, (2007), Vol. E63, pp. 015-016.
73. "4-Nitro-N-[4-4-nitrophenoxy)phenyl]benzamide", M.S.Butt, Z.Akhter, M.Bolte, H.M.Siddiqi, **Acta Crysta.**, (2007), Vol. E63, pp. 0476-0478.
74. "1,4-Bis(4-nitrophenoxy)benzene" M. S. Butt, Z. Akhter, M. Bolte, H. M. Siddiqi, **Acta Crysta.**, (2006), Vol. E62, pp. 03992-03993.
75. "Evolution of electrooptical properties of epoxy-amine thermosets /liquid crystal blends during polymerization after the gel point of the polymer matrix.", Lucas Sannier, Humaira Masood Siddiqi, Ulrich Maschke, Michel Dumon **Journal of Applied Polymer Science**, (2004), Vol. 92, pp. 2621-2628.
76. "Evolution of electro optical properties of Polymer Dispersed Liquid Crystal materials during processing", L. Sannier, H. Masood Siddiqi, M. Dumon, F. Gyselinck, U. Maschke, **Molecular Crystals and Liquid Crystals**, (2001), Vol. 367, pp. 267-275.
77. "Effects of perfluorination of epoxy-amine polymer matrices on the electro optical performance of Polymer Dispersed Liquid Crystal films", L. Sannier, H. Masood Siddiqi, M. Dumon, F. Gyselinck, U. Maschke, **Molecular Crystals and Liquid Crystals**, (2001), Vol. 368, pp. 661-669.
78. "Phase separation kinetics of a S<sub>A</sub> liquid crystal in a reactive epoxy-amine PDLC system: a X-ray diffraction study", M. Dumon, M. F. Achard, H. Masood Siddiqi, J. P. Pascault, F. Hardouin, **Macromolecular Chemistry and Physics**, (2000), Vol. 201, pp. 670-677.
79. "Image analysis of Polymer Dispersed Liquid Crystal System" I. Qamar. H .M. Siddiqi. S. W. Hussain, **Materials Characterization.**, (2000), Vol. 44, pp. 285-289.
80. "Multiple Phase equilibria in polydisperse Polymer/Liquid Crystal blends", C. C. Riccardi, J. Borajo, R. J. J. Williams, H. M. Siddiqi, M. Dumon, J. P. Pascault, **Macromolecules**, (1998), Vol. 31, pp. 1124-1132.

81. "Effect of molar mass of an epoxy oligomer on the phase separation in epoxy based polymer dispersed liquid crystals", H. M. Siddiqi, M. Dumon, J. P. Pascault, **Journal of Materials Chemistry**, (1998), Vol. 8, pp. 1691-1695.
82. "Thermodynamic analysis of reaction –induced phase separation in epoxy-based polymer dispersed liquid crystals (PDLC)", J. Borrajo, C. C. Riccardi, R. J. J. Williams, H. M. Siddiqi, M. Dumon, J. P. Pascault, **Polymer**, (1998), Vol. 39, pp. 845-853.
83. "Polymer –dispersed liquid crystals based on epoxy networks Transformations and phase separation phenomena during polycondensation", H. M. Siddiqi, M. Dumon, J. P. Pascault, **Molecular Crystals Liquid Crystals**, (1998), Vol. 312, pp. 137-155.
84. "Polymer –dispersed liquid crystals based on epoxy networks1: Effects of the liquid crystal addition on the epoxy-amine reaction, H. Masood Siddiqi, M. Dumon, J. P. Eloundou, J. P. Pascault, **Polymer**, (1996), Vol. 37, pp. 4795-4801.
85. "Synthesis of optically active camphorsulphonylbenzimidazoles", M. Hasan, H. Siddiqi, N. Khan and Zia-ul-Haq, **Turkish Journal of Chemistry**, (1996), Vol. 20, pp. 228-233.

#### **Oral/Poster presentations in International/National Conferences/Workshops**

1. H. M. Siddiqi, M. Dumon, J. P. Pascault, "Epoxy based PDLC: Study of polycondensation and phase separation kinetics" *15<sup>th</sup> International Liquid crystal conference*, 3-8<sup>th</sup> July 1994 Budapest Hungary.
2. H.M.Siddiqi, M.Dumon, J.P.Pascault, "Dispersion de cristaux liquides dans une matrice polymere thermodurcissable epoxy/amine: Effets de l'addition du cristal liquide sur la reaction epoxy/amine, *7eme colloque d'expression Francaise sur les cristaux liquides*, 12-15 sept. 1995, Sophia Antipolis France.
3. H. M. Siddiqi, M. Dumon, J. P. Pascault, "Liquid crystal/Epoxy thermoset blend: A kinetic and morphology study." *European symposium on polymer blends*, 12-15May 1996, Maastricht The Netherlands.
4. H. M. Siddiqi, M. Dumon, J. P. Pascault, "Dispersion de cristaux liquides dans une matrice epoxy/amine : Etude de la cinetique, de la separation de phase et de la morphologie", *Region Rhone alpes 7e Rencontre Regionale de la Recherche* 27<sup>th</sup> sept 1996, Lyon France.
5. H. M. Siddiqi, M. Dumon, J. P. Pascault, "Dispersion de cristaux liquides dans une matrice epoxy/amine : Etude de la cinetique ,de la separation de phase et de la morphologie", *Journees de l'ecole doctorale materiaux de Lyon* 12 sept 1996, Lyon France.
6. H.M.Siddiqi, M.Dumon, J.P.Pascault, "Etude de la cinetique de reticulation, de la separation de phase et de la morphologie d'une matrice epoxy/amine en presence d'un additif cristal liquide", *Societe Francaise de chimie, Journee Regionale Centre-Est* 19-20 sept 1996, Lyon France.
7. H.M.Siddiqi, M.Dumon, J.P.Pascault, "Dispersion de cristaux liquides Nematique dans une matrice thermodurcissable epoxy/amine : Effets de l'addition du cristal liquide sur la reaction epoxy/amine, *Journees de'etudes des polymeres JEPO XXIV* 7-11 octobre 1996, Albe Strasbourg France.

8. H.M.Siddiqi, “Toughened Polymer matrix Composites’ Reaction induced phase separation in epoxy modified thermosetting polymers”, *Short course on ceramics and composite materials*, 13-15 April 1998 GIK Institute of Science and technology Topi Pakistan.
9. M.Shoaib, A-ul-Haq, H.M.Siddiqi, Preparation of some ceramics alumina parts for laboratory use, “*7<sup>th</sup> national conference on Frontiers of Physics*”. 19-21 Nov. 1998. Islamabad Pakistan.
10. H. M.Siddiqi, M.Dumon, J.P.Pascualt, ‘Phase diagrams of an epoxy/amine based PDLC system”, *7<sup>th</sup> national conference on Frontiers of Physics*”. 19-21 Nov. 1998. Islamabad Pakistan.
11. M.Dumon, U. Maschke, F. Gyselinck, L. Sannier, H. Masood Siddiqi., “PDLC a matrice epoxyde-amine : effets des cinetiques de polymerisation et d’une perfluoruration surla morphologie et les proprietes electro-optiques”, Oral, *seminaire GDR CNRS no. 606*, novembre 1998, Garchy France.
12. L. Sannier, H. Masood Siddiqi, M.Dumon, F. Gyselinck, U. Maschke, “Proprietes electro-optiques de films PDLC a matrice epoxyde-amine”, Oral 2 , *seminaire GDR CNRS no. 606*, novembre 1999, Garchy France.
13. L. Sannier, M. Dumon, H. Masood Siddiqi, F. Gyselinck, U. Maschke. “Fluorinated epoxy thermosetting polymer matrix and improved electro-optical properties of polymer/liquid crystal composites: Non anchoring effects of the liquid crystal”. Poster No. A 39, **5<sup>th</sup> European adhesion conference**, sept. 18-21, 2000, Lyon France.
14. H.Masood Siddiqi, M. Ulriche, M. Dumon, L. Sannier, F. Gyselinck, “Synthetic and electro-optical studies of some epoxy amine based polymer liquid crystal systems”, **1<sup>st</sup> International & 11<sup>th</sup> National Chemistry Conference**, April 10-14, 2001 Peshawer, Pakistan.
15. M.M.Qasim, Humaira M. Siddiqi, N.Khan, “Synthesis and characterization of some liquid crystalline molecules”, “**International Bhurban Conference of Applied Science and Technology IBCAST** 10-14 June 2002 Pakistan.
16. M.Zaman.N.Khan, H.M.Siddiqi “Synthesis and charachterization of of some amides as potential liquid crystals” **4<sup>th</sup> International & 14<sup>th</sup> National Chemistry Conference**, April 10-14, 2004 Lahore, Pakistan.
17. M.Y.Razzaq,Z.Akhtar,H.M.Siddiqi,A.Nigar,M.S.Butt,“Synthesis and charachterization of ferrocene containing schiff bases” **5<sup>th</sup> International & 15<sup>th</sup> National Chemistry Conference**, Nov 24-27, 2004 Islamabad, Pakistan.
18. A.Afzal, H.M.Siddiqi, N.Khalid. “ Thermal and mechanical properties of interpenetrating epoxy /silica hybrids” **5<sup>th</sup> International & 15<sup>th</sup> National Chemistry Conference**, Nov 24-27, 2004 Islamabad, Pakistan.
19. Naila Khalid, Naseer Iqbal, Humaira Masood Siddiqi\* and Zareen Akhter Synthesis, characterization of organic diamines and their curing with an epoxy resin. **6<sup>th</sup> International & 16<sup>th</sup> National Chemistry Conference**, April 6-8, 2006 Islamabad, Pakistan.
20. Adeel Afzal, Tanzeela Nazir, Humaira M. Siddiqi“Thermo-mechanical property benefits of chemically bonded interpenetrating epoxy-silica hybrid materials”**Frontiers in Polymer Science**, 7-9 June 2009, Mainz, Germany.

21. S.Mir, T.Yasin, H.M.Siddiqi, P.J.Halley,"Silane crosslinked polyethylene/starch/clay composite:Synthesis and characterization, **8<sup>th</sup> International & 20<sup>th</sup> National chemistry conference**, 15-17 February 2010.
22. M.S.U.Khan,Z.Akhter, T.Naz, M.Siddiqq, H.M.Siddiqi,"Synthesis and characteeization of some thermally stable ferrocene basedpolyimide materials containing variable aliphatic spacers, **8<sup>th</sup> International & 20<sup>th</sup> National chemistry conference**, 15-17 February 2010..
23. S.Mir, T.Yasin, H.M.Siddiqi, P.J.Halley," Structural, micro structural and thermal properties of HDPE/carboxymethyl cellulose composite", **1st National Conference on Physical and Environmental Chemistry September 27-29 2010, Baragali Pakistan**
24. S.Mir, T.Yasin, H.M.Siddiqi, P.J.Halley , "Rheological aspects of LLDPE/starch/sepiolite composite" **6<sup>th</sup> IUPAC International Symposium on Novel Materials and their Synthesis October 11-14, 2010 Wuhan, China" Organized by South Central University).**
25. Humaira M.Siddiqi,<sup>1\*</sup> Tanzeela Nazir, Adeel Afzal<sup>1</sup>, Shaukat Saeed<sup>2</sup>, Zakya Rubab<sup>1</sup>" Metal oxide/epoxy amine hybrids: synthesis, morphology and thermal properties. **9<sup>TH</sup> INTERNATIONAL AND 21<sup>ST</sup> NATIONAL CHEMISTRY CONFERENCE-2011, FEBRUARY 7-9, 2011**
26. Asma Iqbal, Humaira M.Siddiqi, "Synthesis and characterization of some rigid rod like molecules as potential liquid crystals" **10th international and 22nd national chemistry conference Nov.21-23, 2011 Faisalabad Pakistan**
27. Mahwish Atta, Humaira M.Siddiqi, Adeel Afzal and Amir Habib, "Synthesis and characterization of epoxy-amine titania composites using glycidoxytrimethoxy silane as a coupling agent", **10th international and 22nd national chemistry conference Nov.21-23, 2011 Faisalabad Pakistan.**
28. Qaiser Mahmood Mughal , Humaira M.Siddiqi, Adeel Afzal, Amir Habib, 2012 won first prize in poster presentation competition in the PAK-US workshop on **Application of nanotechnology 29-30<sup>th</sup> May, 2012, organized by HEJ, Karachi University Karachi, Pakistan**
29. Noor ul Amin, Humaira Masood Siddiqi, Hameedullah Wazir, Adeel Afzal, Amir Habib, "Synthesis and characterization of epoxies blend amine-TiO<sub>2</sub> (17nm) nanocomposites", **Conference on Emerging materials and processes, National University of Science and Technology H-10 Islamabad. August 22-24, 2013.**
30. Rohama Gill, Tahira Bibi, Shahid Saeed Qureshi, Humaira Masood Siddiq, "Nanofabrication of Epoxy Amine Composites Via Lbl Multilayer Assemblies", **44<sup>th</sup> World Chemistry Congress,IUPAC 2013 Istanbul Turkey,11-16 August 2013**
31. S.Azhar Hussain Shah , "26th National and 14th International Chemistry Conference of the Chemical Society of Paksitan, Islamia University Bahawalpur October 05-08, 2015.

## Refereed Conference Proceedings

1. H.M.Siddiqi, M.Dumon, J.P.Pascault, "Polymer dispersed liquid crystals : Liquid crystal/Polymer composites as electro-active materials, 3<sup>rd</sup> international conference on intelligent materials 3-5<sup>th</sup> June 1996, *SPIE*, (1996), Vol., 2779, pp 435-440, Lyon France
2. H. M. Siddiqi B. Borde, M. Dumon, L. Sannier, F.Gyselinck and U.Maschke, Effect of introducing a fluorinated amine in an epoxy amine Polymer Dispersed Liquid Crystal System, in Proceedings of **6<sup>th</sup> International Symposium on Advanced Materials**, Sept 19-23, 1999, pp. 68-72, Islamabad Pakistan.
3. M.Shoaib, H.M. Siddiqi, A-ul Haq, "Preparation of alumina cermaic parts using cellulose binders", Abstarct only, **6<sup>th</sup> International Symposium on Advanced Materials**, Sept 19-23, 1999. , Islamabad Pakistan
4. L. Sannier, H. Masood Siddiqi, M. Dumon, F. Gyselinck, U. Maschke "Electro-optivcal Analysis of epoxy based polymer dispresed liquid crystal films". **FREIBURGER ARBEITSTAGUNG FLÜSSIGKRISTALLE** veranstaltet von der Deutschen Flüssigkristall-Gesellschaft Arbeitsgemeinschaft in der Deutschen Bunsengesellschaft 22. - 24. März 2000 Ort: Chemisches Institut der Universität Freiburg.
5. Tanzeela Nazir, Humaira Masood Siddiqi and Shaukat Saeed, "Synthesis and characterization of DGEBA- D-400-silica Nanocomposites via Sol-Gel Technology", "**3<sup>rd</sup> International Bhurban Conference of Applied Science and Technology IBCAST** 07-12 June 2004 Pakistan.

### Workshops/Trainings

1. "One day training program on rubber, plastic & polymers testing technology". PCSIR Labs Islamabad, 27<sup>th</sup> March 2004.
2. "Workshop on combinatorial chemistry", 7-13 May 2004.
3. One day workshop on "X-Ray Crystallography", Chemistry Department Quaid-I-Azam University Islamabad, Aril 18, 2009.
4. 1<sup>st</sup> Chemistry Alumni meeting, Seminar on "Frontiers of Chemistry" 15-16 May 2009.
5. "Role of Thermal Analysis in advanced materials" Workshop (21-25 march 2011) PINSTECH Nilore
6. Workshop on Molecular modeling in chemistry and beyond, May 29-31, 2011 Department of Chemistry QAU Islamabad.
7. "Symposium on Hydrogen and fuel cell", July 9-11, 2012. Department of Chemistry QAU, Islamabad
8. National workshop on *in silico* tools in medicinal chemistry, December 22-25, 2011 Department of Chemistry QAU Islamabad.
9. National symposium on frontiers of nanotechnology, May 19, 2012, National University of Science and Technology H-10 Islamabad.
10. Series of one day workshops on "Recent trends in Computational Chemistry", May 02-July 02, 2013" Department of Chemistry QAU Islamabad Pakistan.
11. Training workshop on 'Patent Application Filing and Drafting" February 19 2015 ORIC QAU Islamabad Pakistan.



