



Dr. S. Umadevi

UGC Assistant Professor

Contact

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Academic Qualifications: M.Sc. Ph.D.

Teaching Experience: 2 Years

Research Experience: 10 Years

Additional Responsibilities

1. Co-ordinator of 'Women Grievance Cell', IC Department
2. Member of 'Center for Tamil Culture' Cell, Alagappa University

Areas of Research

Synthetic Chemistry, Material Chemistry, Liquid crystals, Nanomaterials

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	-	4
	M.Phil.	4	1
Project	PG	14	5
	UG / Others	-	-

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
23	1	-	-	1

Cumulative Impact Factor (as per JCR) :	66.31
h-index :	12
i10 index :	13
Total Citations :	352

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	DST	2012	2015	Monolayers of liquid crystal – nanomaterial composites: preparation, characterization and applications in sensing and catalysis	24,10,000
2	UGC	2015	2017	Start-Up grant	6,00,000

Ongoing Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	SERB	2016	2019	Liquid crystal functionalized platforms for optical and electro-optical applications	33,97,000

Distinctive Achievements / Awards

- 1 **5 Gold medals** and **2 cash prizes** for the performance in **B.Sc. Chemistry** (1999)
- 2 **1st Rank** in **B.Sc.** examination (1999)
- 3 **2 Gold medals** and **2 cash prizes** for the performance in **B.Ed.** (2000)
- 4 **1st Rank** in **B.Ed.** examination (2000)
- 5 **2 Gold medals** and **a cash prize** for the performance in **M.Sc. Organic chemistry** (2002)
- 6 **2nd Rank** in **M.Sc. Chemistry** examination (2002)
- 7 **Lectureship** qualification from the **Council of Scientific and Industrial Research**, India (2002); Roll. No. 102752
- 8 **Selectee** in Faculty Recharge Programme from UGC as **UGC Assistant Professor**, 2012
- 9 **Early Career Research Award** from Science and Engineering Research Council (SERB), India.

Overseas Exposure / Visits

1. University of Edinburgh, Scotland
2. University of Manitoba, Canada

Membership in

Professional Bodies

1. Life Member: Indian Liquid Crystal Society
2. Life Member: ISEAST

Resource persons in various capacities

Number of Invited / Special Lectures delivered:

1. Delivered a special lecture as **Resource person** for the international conference **CDIC-2016** at Shri Sakthikailash Women's College, Salem held on 29th July 2016

Recent Publications

1. R. Mangaiyarkarasi, S. Selvam, V.Ganesh and S. Umadevi, (2019) A cholesterol based imidazolium ionic liquid crystal: synthesis, characterisation and its dual application as an

- electrolyte and electrode material, *New J Chem.* RSC publication, UK, **43**, 1063—1071(Impact Factor-**3.2**)
2. R. Mangaiyarkarasi, B.Sivaranjini and S. Umadevi, (2018) Facile synthesis of gold nanoparticles capped with an ammonium-based chiral ionic liquid crystal, *Liq. Cryst.*, Taylor and Francis, UK, DOI: 10.1080/02678292.2018.1513170(Impact Factor-**2.7**)
 3. B. Sivaranjini, R. Mangaiyarkarasi, V. Ganesh and S. Umadevi, (2018)Vertical Alignment of Liquid Crystals Over a Functionalized Flexible Substrate, *Sci. Reports*, Nature Publications, UK, **8:8891**, 1-19 (Impact Factor-**4.2**)
 4. S. Sundari, Sheela Berchmans and S.Umadevi, (2018), Non-enzymatic nitric oxide release from biodegradable S-nitrosothiol bound polymer: synthesis,characterization, and antibacterial effect, *Polym Bull.*, Elsevier, Netherlands, **75**, 2971-2985.
 5. B.Rozic, J.Fresnais, C.Molinaro, J.Calixte, S.Umadevi et al., (2017), Oriented gold nanorods and gold nanorod chains within smectic liquid crystal topological defects, *ACS Nano*, ACS publication, America, **11** 6728-6738 (Impact Factor-**13.9**)
 6. S.Umadevi, S.Sundari, V.Ganesh and Sheela Berchmans, (2017), Liquid crystal-gold nanoparticle composite modified indium tin oxide (ITO) substrates and their electrochemical characterisation, *Liq. Cryst.*, Taylor and Francis, UK, **44**, 2222-2229 (Impact Factor-**2.7**)
 7. S.Umadevi, R.Umamaheswari and V.Ganesh, (2017), Lyotropic liquid crystal-assisted synthesis of micro- and nanoparticles of silver, *Liq. Cryst.*, Taylor and Francis, UK, **44**, 1409-1420 (Impact Factor-**2.7**)
 8. S. V. Sheen Mers, S. Umadevi and V. Ganesh (2017), "Controlled growth of gold nanostars: Effect of spike length on SERS signal enhancement", *Chem Phys Chem*, Wiley-VCH, Germany, **18**, 1358-1369, (I. F. **3.0**)
 9. X. Feng, L. Sosa-Vargas, **S. Umadevi**, T. Mori, Y. Shimizu, T. Hegmann, (2015), "Discotic liquid crystal functionalized gold nanorods 2- and 3D self-assembly plus macroscopic alignment and increased charge carrier mobility in hexagonal columnar liquid crystal hosts affected by molecular packing and π - π interactions", *Adv. Funct. Mater.*, Wiley-VCH, Germany, **2**, 1180-1192. (I. F. **11.38**)
 10. **S. Umadevi**, V. Ganesh and Sheela Berchmans, (2014), " Liquid crystal (LC) monolayer on Indium Tin Oxide (ITO): structural and electrochemical characterization", *RSC Advances*, Royal society of Chemistry, UK, **4**, 16409-16417. (I. F. **3.289**)

11. R. K. Shukla, X. Feng, **S. Umadevi**, T. Hegmann and W. Haase, (2014), "Effect of functionalized bulky gold nanorod doping on the electrooptical and dielectric properties of ferroelectric liquid crystal", *Chem. Phys. Lett.*, Elsevier, Netherlands, **599**, 80-85. **(I. F. 2.1)**
12. S. Umadevi, H. C. Lee, V. Ganesh, X. Feng and T. Hegmann, (2014), "A versatile, one-pot synthesis of gold nanostars with long, well-defined thorns using a lyotropic liquid crystal template", *Liq. Cryst.* Taylor and Francis, UK, **41**, 265-276. **(I. F. 2.7)**
13. **S. Umadevi**, X. Feng and T. Hegmann, (2013), " Large area self-assembly of nematic liquid crystal functionalized-gold nanorods" *Adv. Funct. Mater.*, Wiley-VCH, Germany, **23**, 1393-1403, **(I. F. 11.38)**
14. **S. Umadevi**, S. Radhika and B. K. Sadashiva, (2013), " Polar columnar and lamellar mesophases in homologous bent-core compounds derived from methyl 3, 5-dihydroxybenzoate", *Liq. Cryst.* Taylor and Francis, UK, **40**, 1035-1049. **(I. F. 2.7)**
15. **U. Shivakumar**, J. Mirzaei, X. Feng, A. Sharma, P. Moreira and T. Hegmann, (2011) "Nanoparticles - complex and multifaceted additives for liquid crystals", *Liq. Cryst.*, Taylor and Francis, UK, **38**, , 1495 -1514. **(I. F. 2.7)**
16. **S. Umadevi** and B. K. Sadashiva, (2007), "Liquid crystalline properties and dependence of transition temperatures on the length of the flexible alkylene spacer of symmetric dimers composed of bent-core units" *Liq. Cryst.*, Taylor and Francis, UK, **34**, 673-681. **(I. F. 2.7)**
17. **S. Umadevi** and B. K. Sadashiva, (2006), "Novel five-ring bent-core compounds exhibiting a transition from the electro-optically non switchable to a switchable B₇ phase", *Chem. Mater.*, ACS publication, America, **18**, 5186-5192. **(I. F. 9.5)**
18. S. Umadevi, A. Jákli and B. K. Sadashiva (2006) "Odd- even effects in bent-core compounds containing terminal *n*-alkyl carboxylate groups", *Soft Matter*, RSC Publications, UK, **2**, 875-885, 2006. (3.9)
19. **S. Umadevi**, A. Jákli and B. K. Sadashiva (2006), "Bistable linear electro-optical switching in the B₇' phase of novel bent-core molecules", *Soft Matter*, RSC Publications, UK, **2**, 215-222, 2006. (3.9)
20. **S. Umadevi**, B. K. Sadashiva, H. N. Shreenivasa Murthy and V. A. Raghunathan (2017), "Mesogenic dimers composed of bent-core molecules with flexible alkylene spacer", *Soft Matter*, RSC Publications, UK, **2**, 210-214, 2006. (3.9)

21. **S. Umadevi**, S. Radhika and B. K. Sadashiva, (2006), "SmCP_A phase in five-ring bent-core compounds derived from 5-methoxyisophthalic acid", *Liq. Cryst.*, Taylor and Francis, UK, **33**, 139-147, 2006. (2.7)
22. **S. Umadevi** and B. K. Sadashiva (2005), "New five-ring symmetrical bent-core mesogens exhibiting the fascinating B₇ phase" *Liq. Cryst.*, Taylor and Francis, UK, **32**, 1233-1241, (2.7)
23. **S. Umadevi** and B. K. Sadashiva (2005), "Banana-shaped mesogens: Mesomorphic properties of seven-ring esters derived from 5-chlororesorcinol", *Liq. Cryst.*, Taylor and Francis, UK, **32**, 287-297, (2.7)