Research Publications (Last five years)

1. “A method for estimating interfacial tension of liquid crystal embedded in polymer matrix forming PDLC”
   R. R. Deshmukh and M. K. Malik

2. “Phenazines and thiazine: Green synthesis, photophysical properties and dichroic behaviour in nematic host”

3. “Investigation of Liquid Crystal Dispersion and Dielectric Relaxation Behaviour in Polymer Dispersed Liquid Crystal Composite Films”
   S. S. Parab, M. K. Malik, P. G. Bhatia and R. R. Deshmukh

4. “Electro-optics of homogeneously aligned nematic liquid crystals stabilized by a polymer network”
   M. K. Malik and R. R. Deshmukh

5. “Investigation of dielectric properties of poly(metyl methacrylate)-E7 composite films”
   S. S. Parab, M. K. Malik and R. R. Deshmukh

6. “Photopolymerization kinetics and electro-optical properties in mixtures of dichroic dye doped nematic liquid crystal and photocurable polymer”
   Rajendra Deshmukh and Manoj Malik.

7. “Thermodynamic and bias field characterization of a quickly operating antiferroelectric liquid crystal”

8. “Effect of dichroic dye on phase separation kinetics and electro-optical characteristics of polymer dispersed liquid crystals”
Rajendra Deshmukh, Manoj Malik and Sanmesh Parab.

10. “Effect of nematic liquid crystals on optical properties of solvent induced phase separated PDLC composite films”
M. K. Malik, P. G. Bhatia and R. R. Deshmukh,
*Figure published on cover page of Journal (Oct 2012 Issue).

11. “Dielectric relaxation and electro-optical switching behaviour of nematic liquid crystal dispersed in poly(methyl methacrylate)”

12. “Effect of host polymer matrices on electro-optical and dielectric behaviour of polymer dispersed liquid crystal system”

Conferences and Seminars

1. “Electro-optics of homogeneously aligned nematic liquid crystals stabilized by a polymer network”
M. K. Malik and R. R. Deshmukh
International Conference on Materials and Characterization Techniques, held at Vellore Institute of Technology, Vellore, Tamil Nadu, during 10-12 March, 2014.

2. “Investigation of dielectric properties in poly(methyl methacrylate)/E7 composite films”
S. S. Parab, M. K. Malik and R. R. Deshmukh
International Conference on Materials and Characterization Techniques, held at Vellore Institute of Technology, Vellore, Tamil Nadu, during 10-12 March, 2014.

3. “Guest-host effects in dichroic dye-doped polymer dispersed liquid crystal films”
M. K. Malik and R. R. Deshmukh
4. "Effect of doping of dichroic azo dye in nematic liquid crystal and photo-curable polymer"
A. K. Jain, M. K. Malik and R. R. Deshmukh

5. "Dielectric properties of Poly(methyl methacrylate-co-butyl acrytale)/Liquid Crystal-E44 composite films"
S. S. Parab, M. K. Malik and R. R. Deshmukh

6. "Dichroic Dye Induced Nonlinearity in Polymer Dispersed Liquid Crystal Materials for Display Devices"
R. R. Deshmukh, M. K. Malik and S. S. Parab
International Conference on Recent Trends in Advanced Materials (ICRAM) held at Vellore Institute of Technology, Tamil Nadu, India during 20-22 February 2012.

7. "Effect of Host Polymer Matrices on Electro Optical and Dielectric Behaviour of Polymer Dispersed Liquid Crystal System"
R. R. Deshmukh, S. S. Parab and M. K. Malik
International Conference on Recent Trends in Advanced Materials (ICRAM) held at Vellore Institute of Technology, Tamil Nadu, India during 20-22 February 2012.

8. "Opto-Electronic Switching Properties of Dichroic Polymer Dispersed Liquid Crystal Composite Films"
M. K. Malik and R. R. Deshmukh
18th National Conference on Liquid Crystals held at North Eastern Regional Institute of Science and Technology, Arunachal Pradesh, India, 15-17 November 2011.

S. S. Parab, M. K. Malik and R. R. Deshmukh
18th National Conference on Liquid Crystals held at North Eastern Regional Institute of Science and Technology, Arunachal Pradesh, India 15-17 November 2011.

Research areas/ Specialization
Liquid crystals, Electro-optical devices, Polymer dispersed liquid crystals, Liquid crystal nanocomposites.