(V.S.S. Sastry)

Information for the Annual Report (2015)

Papers published in Journals:

1. Regina Jose, Gregor Skacej, V.S.S. Sastry and Slobodan Zumer, *Colloidal nanoparticles trapped by liquid-crystal defect lines: A lattice Monte Carlo simulation,* Phys. Rev. E **90**, 032503 (2014)

2. B. Kamala Latha, Regina Jose, K.P.N. Murthy and V.S.S. Sastry, *Detection of an intermediate biaxial phase in the phase diagram of biaxial liquid crystals: Entropic sampling study,* Phys. Rev. E (Rapid Comm.) **89**, 050501 (2014)

3. D. Jayasri, Regina Jose, K.P.N. Murthy, and V.S.S. Sastry, *Effect of phase shift between geometrical and chemical patterning in nematic liquid crystal cells: A simulational study,* Compt. Mat. Sci. **92**, 238 (2014)

4. B. Kamala Latha, Regina Jose, K.P.N. Murthy, and V.S.S. Sastry, *Reexamination of the mean-field phase diagram of biaxial nematic liquid crystals: Insights from Monte Carlo investigations,* Phys. Rev. E **92**, 012505 (2015)

Presentations in Conferences:

1. Abdul Musavir, G. Sai Preethi and V.S.S. Sastry, *The role of elastic constants in a confined thin film: Predictions from Monte Carlo simulations,* National Conference on Current Trends in Soft Matter (NCCTSM-2015), March, 2015, at Thiruvarur, India.

2. Regina Jose, B. Kamala Laatha, K.P.N. Murthy and V.S.S. Sastry, *Effect of external fields on the condensation of a biaxial nematic liquid crystal phase with significant coupling between uniaxial and biaxial orders,* National Conference on Current Trends in Soft Matter (NCCTSM-2015), March, 2015, at Thiruvarur, India.

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JOURNAL PAPER

G. LAKSHMI NARAYANA RAO, SHRAVAN KUDIKALA, SAMRAT L. SABAT, **K.C. JAMES RAJU**, "Modeling of interdigitated capacitor on tunable BST films and study of its equivalent circuit behaviour," Engineering Science Letters, vol. 2014, Article ID 5, 2014.

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1. Bashaiah Sindam, K. J. Janas, P. K. Sharma and **K. C. James Raju**, " Broad-Band Transmission From Air Filled Waveguide To A Dielectric Filled Waveguide Using Dielectric Tapered Transition" ISSS-2014, July 8-11, Indian Institute of Science, Bangalore, India.

2. DRA FOR ISM BAND APPLICATIONS USING HIGH K CERAMIC SUBSTRATE K.Manohar Prasad, **K.C.James Raju**, Presented at APSYM 2014, Cochin University of Science & Tech. During 17-19, Dec. 2014.

Conference Presentations:

1. "Minimization of insertion loss and boresight error in designing Radomes", Shubham Kumar Gupta, Gvrk Rao, **K.C. James Raju** presented at Frontiers in Physics [FIP-2014] organized by School of Physics, University of Hyderabad, 17-18 October 2014.

2. "Voltage tunable microwave devices using bst varactors", B.Shiva Vikram, Surajit K Nath, G.Lakshmi Narayana Rao and K.C.James Raju, presented at Frontiers In Physics [FIP-2014] organized by School of Physics, University of Hyderabad, 17-18 October, 2014.

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Continuum in the X-Z---Y weak bonds: Z= main group elements, J. Joy, A. Jose and E. D. Jemmis, J. Computational Chemistry, 2015., Article first published online: 17 AUG 2015, DOI: 10.1002/jcc.24036.

Relative stabilities of condensed face sharing mono- and di- carboranes: $CB_{20}H_{18}$ and $C_2B_{19}H_{18}$, K. Vidya and E. D. Jemmis, J. Organomet. Chem. R. Grimes Issue, 2015,, http://dx.doi.org/10.1016/j.jorganchem.2015.07.007

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1. M. Suman Kalyan, G. Anjan Prasad, V. S. S. Sastry and K. P. N. Murthy, A note on non-equilibrium work fluctuations and equilibrium free energies, *Physica A* **390**, 1240 (2011).

2. M. Suman Kalyan and K. P. N. Murthy, Monte Carlo study of force induced melting of DNA hairpin, *Physica A***428**, 38-45 (2015).

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1. M. Suman Kalyan, G. Anjan Prasad, V. S. S. Sastry and K. P. N. Murthy Nonequilibrium work fluctuations and equilibrium free energies, *Proceedings of Solid State Physics Symposium***54**, 525 (2009).

2. M.Suman Kalyan} and K. P. N. Murthy, Force induced melting of DNA hairpin: A Monte Carlo study, *AIP Conference Proceedings***1512**, 144 (2013).