

## List of Publications and Patents

### I) **Research Papers**

- 1) N D Srinivas, Naveen Nagaraj, KSMS Raghavarao (2002) "Acoustic field assisted demixing in aqueous two-phase polymer/polymer systems", *Bioseparation*, **10**, 203 - 210
- 2) A V Narayan, Naveen Nagaraj, Umesh H Hebbar, A Chakkravarthi, KSMS Raghavarao, Sanjay Nene (2002) "Acoustic field assisted osmotic membrane distillation", *Desalination*, **147**, 149 -156
- 3) Naveen Nagaraj, N D Srinivas, KSMS Raghavarao (2002) "Acoustic field assisted demixing in aqueous two-phase systems", *Journal of Chromatography-A*, **977**, 163 -172
- 4) Naveen Nagaraj, A V Narayan, N D Srinivas, KSMS Raghavarao, (2003), "Microwave field assisted enhanced demixing of aqueous two-phase systems", *Analytical Biochemistry*, **312**(2), 134 -140
- 5) Naveen Nagaraj, Ganapathi Patil, B. Ravindra Babu, Umesh H Hebbar, KSMS Raghavarao, Sanjay Nene, (2003) "Modeling of mass transfer in osmotic membrane distillation" *Proceedings of FILTECH EUROPA-2003, volume II*, II435-II443.
- 6) KSMS Raghavarao Naveen Nagaraj, B. Ravindra Babu, Ganapathi Patil, Umesh H Hebbar, and Sanjay Nene (2003) "Athermal Membrane Process for the Concentration of Liquid Foods and Natural Colors" *Trends in Food Science and Technology* (accepted for publication)
- 7) Naveen Nagaraj, Ganapathi Patil, B. Ravindra Babu, Umesh H Hebbar, KSMS Raghavarao, Sanjay Nene (2004) "Modeling of mass transfer in osmotic membrane distillation" *Journal of Membrane Science* (communicated)
- 8) Naveen Nagaraj, S Chethana, KSMS Raghavarao (2004) "Electrokinetic demixing of polymer/salt systems" *Electrophoresis* (communicated)

- 9) **KSMS Raghavarao, Naveen Nagaraj, B. Ravindra Babu, Ganapathi Patil, Umesh H Hebbar, and K Niranjana (2003) "Recent Developments in Membrane processing for the Concentration of Liquid Foods/Food colors"** *Transactions of the Institution of Chemical Engineers; Part C: Food and Bio-products Processing* (to be forwarded for publication)
- 10) **Naveen Nagaraj, A V Narayan, Ravindra Babu, KSMS Raghavarao (2004) Recovery of phase forming components spent phases using microwave field"** *Biotechnology Letters* (to be communicated)

#### **Chapter/Volume in Books:**

KSMS Raghavarao, Naveen Nagaraj, B. Ravindra Babu, Ganapathi Patil, and K Niranjana (2004) **"Athermal membrane processes for the concentration of liquid foods and natural colors"** *Emerging Technologies for Food Processing*, Academic Press (In Press)

#### **II) Patents Filed**

##### **Indian Patents**

- 1) **KSMS Raghavarao, Umesh H Hebbar, T Ramesh, Naveen Nagaraj (2001) "A novel process for the enhancement of transmembrane flux in membrane based separations"** (*Patent no. 385/DEL/2001*)
- 2) **KSMS Raghavarao, Naveen Nagaraj, Umesh H Hebbar, S Chethana, R S Barhate (2002) "An improved device for enhancing demixing rate in aqueous two-phase systems"** (*Patent no: 88/NF/00*)
- 3) **Naveen Nagaraj, Chethana S, S G Jayaprakashan, Umesh H Hebbar, Mahadevaswamy M, G A Ravishankar, KSMS Raghavarao, (2003) "An improved process for the extraction, separation, purification and concentration of natural food colorant"** (*Patent no.195/NF/03*)
- 4) **Chethana S, Naveen Nagaraj, G A Ravishankar, KSMS Raghavarao (2003) "An improved process for the concentration and purification of phycocyanin"** (*Patent no. 390/DEL/03*)
- 5) **N K Rastogi, KSMS Raghavarao, Naveen Nagaraj, R Subramanian, Maya Prakash (2003) "A non- thermal process for the preparation of tender coconut water concentrate"** (*Patent no.431/DEL/03*)

- 6) **Naveen Nagaraj, Chethana S, KSMS Raghavarao,(2003) "A process for the recovery of polyethylene glycol (PEG) from spent aqueous two-phase systems" (Patent no. 435/DEL/03)**
- 7) **C Anandharamakrishna, Naveen Nagaraj, G K Jayaprakash, S Jena, M C Varadhranj, KSMS Raghavarao (2003) "An athermal membrane process for the concentration of garcinia extract" (Patent application no. 479/NF/2003)**
- 8) **Naveen Nagaraj, Ganapathi Patil, S G Jayaprakashan, R Subramanian, Maya Prakash, T R Shamala, KSMS Raghavarao (2004) " A novel process for the preparation of pineapple juice concentrate" (Submitted to CSIR for patent filing)**

#### **US/PCT Patents**

1. **Naveen Nagaraj, Chethana S, KSMS Raghavarao,(2003) "A process for the recovery of polyethylene glycol (PEG) from spent aqueous two-phase systems" (Submitted to US Patent Office)**
2. **Naveen Nagaraj, Chethana S, S G Jayaprakashan, Umesh H Hebbar, Mahadevaswamy M, G A Ravishankar, KSMS Raghavarao, (2003) "An improved process for the extraction, separation, purification and concentration of natural food colorant" (Submitted to CSIR for filing US patent)**
3. **Chethana S, Naveen Nagaraj, G A Ravishankar, KSMS Raghavarao (2003) "An improved process for the concentration and purification of phycocyanin" (Submitted to CSIR for filing US Patent)**

#### **iii) Papers presentations in symposia:**

1. **A V Narayan, Naveen Nagaraj, Umesh H Hebbar, A Chakkaravarthi, KSMS Raghavarao, Sanjay Nene, "Acoustic field assisted osmotic membrane distillation", ICOM-2002, held at Toulouse, France on 7<sup>th</sup> to 12<sup>th</sup> July-2002**
2. **Naveen Nagaraj, Ganapathi Patil, B. Ravindra Babu, Umesh H Hebbar, KSMS Raghavarao, Sanjay Nene, "Modeling of Mass Transfer in Osmotic Membrane Distillation" FILTECH EUROPA-2003 held on 21-23<sup>rd</sup> October-2003, Dusseldorf, Germany**

3. **Naveen Nagaraj, B Ravindra Babu, A B Hemavathi, Umesh H Hebbar, KSMS Raghavarao and Sanjay Nene, "Osmotic Membrane Distillation: A Potential Alternative for the Concentration of Liquid foods and Natural colors" IFCON-2003, held at Mysore, on 5-8<sup>th</sup> December-2003.**
  
4. **A V Narayan, Naveen Nagaraj, KSMS Raghavarao, " A New Method for the Recovery of PEG from Spent Aqueous Two Phase Systems" IFCON-2003, held at Mysore, on 5-8<sup>th</sup> December-2003.**
  
5. **Ganapathi Patil, Naveen Nagaraj, Umesh H Hebbar, KSMS Raghavarao, "Acoustic Enhancement in Transmembrane Flux" IFCON-2003, held at Mysore, on 5-8<sup>th</sup> December-2003.**
  
6. **S Rajashekhara, Naveen Nagaraj, Ganapathi Patil, R Subramanian, Maya Prakash. KSMS Raghavarao, N K Rastogi, "Membrane Based Process for the Concentration of Tender Coconut water" IFCON-2003, held at Mysore, on 5-8<sup>th</sup> December-2003.**
  
7. **Naveen Nagaraj, B Ravindra Babu, Ganapathi Patil, Umesh H Hebbar, KSMS Raghavarao, Sanjay Nene" Modeling of mass transfer mechanism in osmotic membrane distillation of liquid foods" National Seminar on Membranes and Technology: Challenges and Opportunities held at RRL, Jorhat, on 12-14<sup>th</sup> February-2004.**