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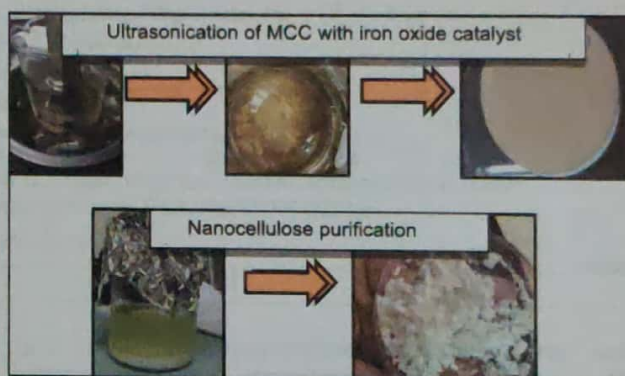
NUMBER 02

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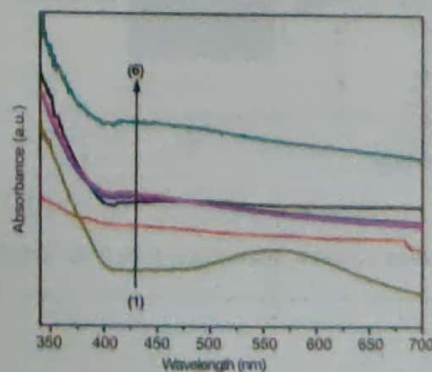
### Papers

- 265 **Catalytic conversion of microcrystalline cellulose to nanocellulose using iron oxide catalysts** The synergistic combination of ultrasonication and action of iron oxide catalysts proved effective in the controlled depolymerisation process of cellulose. Maghemite ( $\gamma\text{-Fe}_2\text{O}_3$ ) shows the highest activity, followed by hematite and magnetite.



Durga Devi Suppiah\* & Mohd Rafie Johan

- 271 **Studies on palladium based bimetallic catalysts Pd-M/TiO<sub>2</sub> (M = Cu, Ag & Au): I-Selective hydrogenation of 1-heptyne** Selective hydrogenation of 1-heptyne to heptene using two series of bimetallic catalysts of the type Pd<sub>(1-x)</sub>Au<sub>x</sub> and Pd<sub>m</sub>M<sub>n</sub>, (M = Cu, Ag and Au) supported on TiO<sub>2</sub>-P-25, at atmospheric pressure and temperature range 293–313 K, reveals maximum activity for Pd<sub>0.9</sub>Au<sub>0.1</sub> and the activity pattern following the trend: Pd-Au > Pd-Ag = Pd-Cu > Pd, for Pd<sub>0.9</sub>M<sub>0.1</sub> series. Interplay of ligand as well as ensemble effects influence the adsorption and activation of 1-heptyne, leading to the observed activity patterns.

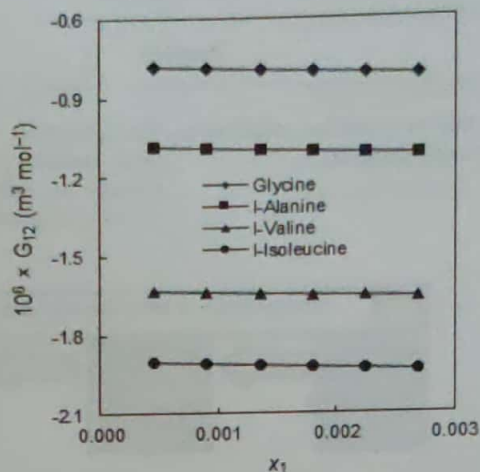


A Saranya, G Vivekanandan, K Thirunavukkarasu, K R Krishnamurthy & B Viswanathan\*

## Notes

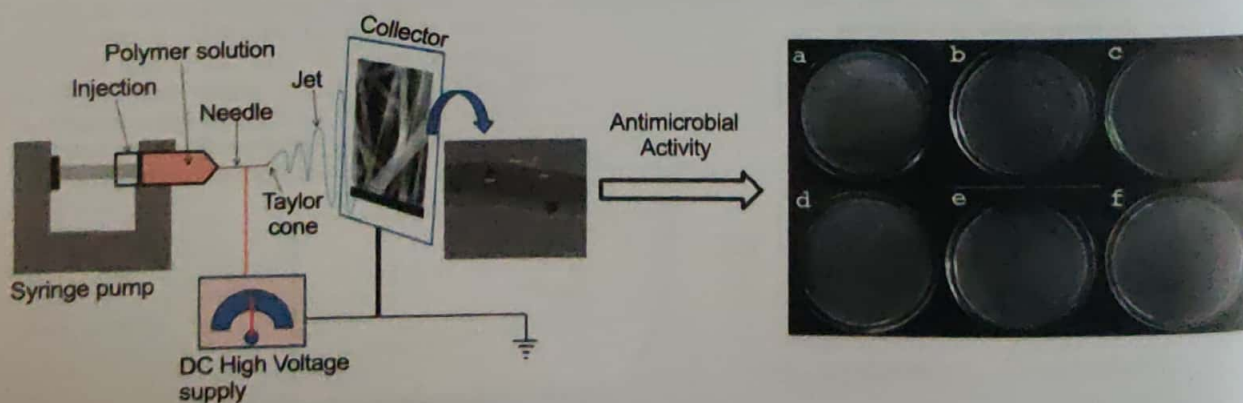
- 281 Study of Kirkwood-Buff integrals of selected polar and nonpolar amino acids in aqueous-streptomycin sulphate solutions at 298.15 K

The Kirkwood-Buff theory is used to characterize the intermolecular interactions of amino acids with drug by directly calculating  $G_{11}$ ,  $G_{22}$  and  $G_{12}$  parameters which represent solute-solute, solvent-solvent and solute-solvent interaction, respectively.



Y Bisht & A K Nain\*

- 288 Electrospun nano silver embedded polystyrene composite nanofiber as a possible water disinfectant
- Nano silver (Ag) embedded polystyrene (PS) composite nanofibers prepared by electrospinning technique using *N,N*-dimethylformamide solvent, exhibit antibacterial activity against Gram-negative *Escherichia coli* and Gram-positive *Bacillus subtilis* microorganisms, evaluated by well diffusion and viable cell count methods.



Nirmal N Patel, Mehdihasan I Shekh, Kaushal P Patel\* & Rajnikant M Patel

- 294 Guide to Authors

Authors for correspondence are indicated by (\*)