

**Published/communicated:**

- liquid phase hydroformylation of propene under mild pressure conditions in alcoholic media: Isolation and Characterization of species separated out during the reaction.
- Vivek K. Srivastava, Ram S. Shukla, Hari C. Bajaj, Raksh V. Jasra; **Journal of Molecular Catalysis A: Chemical**, vol. 202, year 2003, p. 65-72.
2. Kinetics of interaction of carbon monoxide and  $\text{Ru}^{\text{II}}\text{Cl}_2(\text{PPh}_3)_3$  in a mixed aqueous medium.
- Vivek K. Srivastava, Sharad D. Bhatt, Ram S. Shukla, Raksh V. Jasra; **Reaction Kinetics and Catalysis Letters**, vol. 81, year 2004, p. 99-105.
3. The Rh, Co, Ru metal catalyzed hydroformylation of hex-1-ene using triphenylphosphine, triphenylarsine and triphenylantimony as ligands.
- Vivek K. Srivastava, Ram S. Shukla, Hari C. Bajaj, Raksh V. Jasra; **Applied Catalysis A: General**, (In press).
4. Rh, Co, Ru and Pd metal complex catalyzed hydroformylation of ethylene using triphenylphosphine, triphenylarsine and triphenylantimony as ligands.
- Vivek K. Srivastava, Sharad D. Bhatt, Ram S. Shukla, Hari C. Bajaj, Raksh V. Jasra; **Reaction Kinetics and Catalysis Letters**, (In Press).
5. Kinetic studies on the hydroformylation of 1-hexene using  $\text{RhCl}(\text{AsPh}_3)_3$  as a catalyst.
- Vivek K. Srivastava, Sumeet K. Sharma, Ram S. Shukla, N. Subramanyam, Raksh V. Jasra; **Industrial & Engineering Chemistry Research**, (under revision).
6. Hydroformylation reaction for producing aldehydes and alcohols: An overview Part 1: Commercial Aspect.
- Vivek K. Srivastava, Dharmesh U. Parmar, Raksh V. Jasra; **Chemical Weekly**, July 8, year 2003, p. 173-178.
7. Hydroformylation reaction for producing aldehydes and alcohols: An overview Part 2: Technology.
- Vivek K. Srivastava, Dharmesh U. Parmar, Raksh V. Jasra; **Chemical Weekly**, July 15, year 2003, p. 181-190.
8. Solid base catalysts for Isomerization of 1-Methoxy-4-(2-propen-1-yl)benzene to 1-Methoxy-4-(1-propen-1-yl)benzene.

C. Bajaj, Raksh V. Jasra; **Catalysis Communications**, vol.

- Solvent-free isomerization of methyl chavicol to *trans*-anethole using transition metal complexes as catalysts.  
Sumeet K. Sharma, Vivek K. Srivastava, Priti H. Pandya, Raksh V. Jasra; **Catalysis Communications**, (under revision).
- Single step selective synthesis of 2-ethylhexanal and 2-ethylhexenal from propylene using multi-functional catalyst system (**Manuscript under preparation**).
- Isomerization of methyl chavicol to *trans*-anethole using ruthenium metal complexes as catalysts: A kinetic study (**Manuscript under preparation**).

### 8.2. Patents filled/granted

- Process for the preparation of aldol derivatives from alkenes using catalyst  
Raksh Vir Jasra, Vivek Kumar Srivastava, Ram Sambhar Shukla, Sharad Durgashankar Bhatt, Hari Chand Bajaj; **Filed for US and PCT-patent**.
- Catalytic process for the preparation of *trans*-anethole from methyl chavicol.  
Raksh Vir Jasra, Sumeet Kumar Sharma, Vivek Kumar Srivastava; **Filed for US-patent**.

### 8.3. Papers/posters presented in conference/symposium:

- Eco-friendly solid base catalysts for isomerization of 1-Methoxy-4-(2-propen-1-yl)benzene to 1-Methoxy-4-(1-propen-1-yl)benzene. Paper presented in **National Symposium on New Horizon of Heterogeneous Catalysis**, held at Banaras Hindu University, Varanasi, India during February 2002.
- $\text{RuCl}_2(\text{PPh}_3)_3$  catalyzed liquid phase hydroformylation of propene under mild pressure conditions in alcoholic media: Isolation and Characterization of species separated out during the reaction. Paper presented at **Third All Gujarat Research Scholar Meet (TAGRSM)**, organized by Indian Chemical Society, Vadodara Chapter, held at Vadodara, India during February 2003.
- Comparative study for the Rh, Co, Ru metal catalyzed hydroformylation of hex-1-ene using triphenylphosphine, triphenylarsine and triphenylantimony as ligands. Poster presented in **10<sup>th</sup> National Symposium on Modern Trends in Inorganic**

Indian Institute of Technology, Bombay, India during

4. Hydroformylation of ethylene catalyzed by cobalt, palladium and ruthenium complexes with triphenyl based phosphine, arsine and antimony ligands. Poster presented in **National Workshop on Advances in Catalysis**, held at Loyola College, Chennai, India during January 2004.

#### **8.4. Additional activity:**

1. Catalysis workshop attended entitled "Orientation Programme on Catalysis for Research Scholars" held at Indian Institute of Technology Bombay, India during February 2001.