CURRICULUM VITAE

Name: Mujmule Rajendra Basavant
E-mail: rajendramujmule@gmail.com
Contact No: +81-010-4985-2030

OBJECTIVE:

To put my abilities and learning skills to best use and make my effective contribution to an organization for a bright and rewarding career.

EDUCATIONAL QUALIFICATION:

2018-2021 Ph.D. in Energy Science and Technology (Chemistry)

Myongji University, Natural Science Campus, 116 Myongji-ro; Cheoin-gu, Yongin-si, Gyeonggi-do, South Korea

GPA: 4.42/4.50

Doctoral dissertation:

An Investigation of Chemical Fixation of CO_2 into Cyclic Carbonates over Metal Oxide, Ionic Liquid and Carbonaceous Catalysts

Research funding:

Myongji University; Korea Institute of Energy Technology Evaluation and Planning (KETEP); Ministry of Trade, Industry and Energy (MOTIE)

2014-2016 Master of Science (M.Sc.) in Inorganic Chemistry

Savitribai Phule Pune University (Formerly University of Pune), Ganeshkhind Road, Pune, Maharashtra 411007, India

Grade: First class (A)

Thesis: Asymmetric transfer hydrogenation of imine in water.

(Project work completed in National Chemical Laboratory, Pune, India)

2011-2014 Bachelor of Science (B.Sc.) in Chemistry

Savitribai Phule Pune University (Formerly University of Pune), Ganeshkhind Road, Pune, Maharashtra 411007, India

Grade: First class (A)

WORK EXPERIENCE:

2016-2017 Company: Eternis Fine Chemicals Ltd.

Designation: Trainee Chemist

Role in: 2016 (4 July)-2017 (6 May)

Job Profile

• Analysis of in-process samples.

• Familiar with various reaction processes such as Aldol Condensation, Hydrogenation.

• Analysis of raw material sample.

• Familiar with wet analysis.

• Analysis and documentation of finished goods.

• Maintaining 5 'S' system to sustain good laboratory practices.

PUBLICATIONS:

- **R. B. Mujmule**, M. P. Raghav Rao, P. V. Rathod V. G. Deonikar, A. Chaugule, Hern Kim*, Synergistic effect of a binary ionic liquid/base catalytic system for efficient conversion of epoxide and carbon dioxide into cyclic carbonates, Journal of CO_2 Utilization 33, 284-291 (2019 October), SCI IF = 7.132 first-author.

- **R. B. Mujmule,** W. J. Chung, Hern Kim*, Chemical fixation of carbon dioxide catalyzed via hydroxyl and carboxyl rich glucose carbonaceous material as a heterogeneous catalyst, Chemical Engineering Journal, 395, 125-164 (2020 September 1), SCI IF= 13.273 first-author.

- **R. B. Mujmule**, H. S. Jadhav, Hern Kim, Synergetic effect of $ZnCo_2O_4$/inorganic salt as a sustainable catalyst system for CO2 utilization, Journal of Environmental Management 298, 113-433, (July 2021), SCI IF= 6.789 first-author

- P. V. Rathod, **R. B. Mujmule**, A. R. Jadhav, W. J. Chung, Hern Kim*, Efficient dehydration of glucose, sucrose, and fructose to 5-hydroxymethylfurfural using tri-cationic ionic liquids, Catalysis Letters 149, 672–687 (2019 January 28), SCI IF = 3.186 Co-author.

- V. G. Deonikar, **R. B. Mujmule**, D. R. Patil, Hern Kim*, Efficient decontamination of toxic phenol pollutant using LaCO3OH nanowires decorated Ag3PO4 hierarchical composites mediated by metallic Ag, Science of The Total Environment 675, 325-336 (2019 July 20), SCI IF = 7.963 Co-author.

MANUSCRIPT (in preparation or submitted or revised or in print)

- **R. B. Mujmule**, Hern Kim*, Efficient imidazolium ionic liquid as a tri-functional robust catalyst for chemical fixation of CO_2 into cyclic carbonates, (under review).

- **R. B. Mujmule**, Hern Kim*, Efficient synthesis of cyclic carbonate via direct oxidative carboxylation of olefins over a metal-carbon framework catalyst, Target Journal, Chemical Engineering Journal (In preparation), SCI IF= 13.273 first-author.

CONFERENCE PRESENTATIONS

- **R. B. Mujmule**, Hern Kim*, Synthesis highly efficient, selective and sustainable imidazolium based ionic liquids for carbon dioxide conversion into dimethyl carbonate and propylene carbonate, **International Conference on Functional Materials 2018 (ICFM 2018), Shanghai, China, Oral, September 15-17, 2018.**

- **R. B. Mujmule**, Hern Kim*, Highly efficient catalytic system for carbon dioxide conversion into linear carbonate and cyclic carbonate, **The Korean society of Industrial and engineering chemistry 2018 (KSIEC 2018), Jeju, Republic of Korea, Poster, October 31-November 02, 2018.**

- A. R. Jadhav, P. V Rathod, **R. B. Mujmule**, Hern Kim*, Catalytic conversion of fructose to 5-HMF using novel tri-cationic thiazole-based ionic liquids, **The Korean society of Industrial and engineering chemistry 2018 (KSIEC 2018), Jeju, Republic of Korea, Poster, October 31-November 02, 2018.**

- **R. B. Mujmule**, Hern Kim*, Efficient catalytic system for carboxylation of alkynes employing carbon dioxide, **2019 KSIEC spring, Busan, Republic of Korea, Poster, May1~3.**

- **R. B. Mujmule**, Hern Kim* Carbonaceous-based heterogeneous catalyst for sustainable chemical fixation of carbon dioxide and epoxides into cyclic carbonates, **2019 KSIEC Fall Meeting, Jeju, Republic of Korea, Poster, October 30-November 02, 2019.**

- **R. B. Mujmule**, Hern Kim* Hydroxyl-ionic liquid act as a robust heterogeneous catalyst for chemical fixation of CO_2 into cyclic carbonates, **2020 KSIEC Fall Meeting, Poster, October 14-16, 2020.**

- **R. B. Mujmule**, Hern Kim* Chemical fixation of carbon dioxide catalyzed via hydroxyl and carboxyl-rich glucose carbonaceous material as a heterogeneous catalyst, **2020 KSIEC Fall Meeting, Poster, October 14-16, 2020.**

- **R. B. Mujmule**, Hern Kim* Benzimidazole-based ionic porous polymer for effective CO2 enrichment and utilization, **2021 The Polymer Society of Korea, Fall Meeting, Poster, October 20-22, 2021.**

AWARD

- **R. B. Mujmule**, Hern Kim* Efficient synthesis of cyclic carbonate via direct oxidative carboxylation of olefins over a metal-carbon framework catalyst, **KSIEC spring 2021, Busan, Republic of Korea, Poster, May13~14** (**Best Poster Award**).

RESEARCH AND TECHNICAL SKILLS

- Advanced synthesis of metal oxides, ionic liquids, composites and complexes via hydrothermal treatment, reflux method, annealing process, sol-gel method, electrospinning method; for chemical fixation of CO_2 into value-added products, CO_2 absorption and catalytic reduction applications.

- Excellent material's characterization analysis skills using tests FTIR, UV-Vis, XRD, FE-SEM, HR-TEM, EDX, BET, XPS, TPD, TGA, HPLC and GC.

- Proficient in software programs such as PANalytical's X'Pert High Score Plus, OriginPro 2016, XPS peak 41, Chem draw and.ACD/NMR processor application.

- Excellent chemical, physical, materials laboratory skills and experiences

- Proficient in Microsoft Office 97-2016 such as Microsoft Word, Excel, PowerPoint,

PERSONAL SKILLS:

Comprehensive problem-solving abilities.Flexibility in work, positive attitude, creative & straightforward.

REFERENCE:

Professor Hern Kim

PhD, Myongji University

+82-10-4323-4652; hernkim@mju.ac.kr

I hereby certify that the above information is true and correct to the best of my knowledge.

Mujmule Rajendra B.