

# Curriculum Vitae

**Dr. Bhausaheb S. Rajput**

**Ph.D. (Polymer Chemistry)**

Polyolefin Lab, Polymer Science and Engineering Division,

National Chemical Laboratory, Pune-411008, India,

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## STRENGTHS

- Synthesis of new monomers and their condensation polymerization for synthesis of various polymers such as polyacetals, copolyacetals, polyoxalates, polyethers and functional polyolefins.
- Analyzing and interpreting skills for organic compounds, monomers and polymers using the various analytical techniques.
- Determination of polymer molecular weight, thermal properties and mechanical properties.
- Hydrolytic degradation of polymers.

## TECHNICAL SKILLS

- **Polymer Synthesis:** Condensation polymerization, addition polymerization and degradation of polymers.
- High pressure reactions such as isomerizing hydroformylation, isomerizing alkoxy carbonylation and insertion copolymerization of functional olefins.
- Expertise in Schlenk technique, high pressure reactors and handling glove box
- **Characterization techniques:** DSC, TGA, GPC, NMR, IR, etc.

## OTHER SKILLS

- Drafting patents, writing proposals, research papers, reports and reviews.
- Reporting and presenting results.
- Using range of software, techniques and equipment to carry research and analysis.
- Experience in managing student and projects.
- Ensuring that health and safety standard.

## PROFESSIONAL EXPERIENCE

After a post-graduation (M.Sc), one year industrial experience;

- 08/2010-10/2010: Worked as QC officer in Hagel Capsules Industries Ltd. Dabhel, Daman and Diu, India.
- 11/2010-07/2011: Worked as junior officer in IPCA Laboratories Athal, Dadra and Nagar Haveli, India for 09 Month.

## EDUCATION

- ❖ **Ph.D.** (Polymer Chemistry), 08/2016-09/2019, National Chemical Laboratory, Pune, India.  
**Thesis Title** “Isohexide and Plant Oil Based Renewable and Degradable Polymers”  
Principal Investigator: **Dr. Samir H. Chikkali.**
- ❖ **M.Tech.** (Oleochemicals and Surfactant Technology), 08/2011-07/2013, Kavayitri Bahinabai

Chaudhari, North Maharashtra University, Jalgaon, Maharashtra, India.

- ❖ **M.Sc.** (Industrial Chemistry), 07/2008-07/2010, Kavayitri Bahinabai Chaudhari, North Maharashtra University, Jalgaon, Maharashtra, India.
- ❖ **B.Sc.** (Chemistry), 07/2005-06/2008, K.A.C. S, College Parola, (Affiliated with Kavayitri Bahinabai Chaudhari, North Maharashtra University, Jalgaon, Maharashtra, India.

## RESEARCH EXPERIENCE

- ❖ Worked as Project Assistant and Project Fellow on the topic “**Sustainable polyacetals from isohexide**” as well as “**Synthesis of renewable copolyacetals with tunable degradation**” with **Dr. Samir H. Chikkali** at CSIR-National Chemical Laboratory, Pune.  
Project Assistant-II: 07/2013-01/2014  
Project Fellow: 01/2014-07/2016.
- ❖ Worked as Ph.D. Student on the topic “Synthesis of isohexides-di (ether-ene)s and ADMET polymerization” with **Dr. Samir H. Chikkali** at CSIR-National Chemical Laboratory, Pune.  
Ph.D. student: 07/2016-04/2018.
- ❖ CSIR-Senior Research Fellow for Ph.D. on the topic “**Cross-metathesis of bio-renewable dioxalates and diols to film forming degradable polyoxalates**” with **Dr. Samir H. Chikkali** at CSIR-National Chemical Laboratory, Pune.  
Senior Research Fellow: 05/2018-09/2019.

## AWARDS

- ❖ Awarded Best Poster Presentation Prize in International Conference on “Global Opportunities in Latest Developments in Chemical Technology (GOLD- CT-2014)”, organized by School of Chemical Sciences, K.B.C.N.M.U., Jalgaon, Maharashtra, India.
- ❖ Awarded CSIR-Senior Research Fellowship (CSIR-SRF).

## POSTER PRESENTATION IN CONFERENCE/MEETING

- ❖ Synthesis of Renewable Copolyacetals with Tunable Degradation; **poster presentation** at National Science Day celebration, National Chemical Laboratory, Pune, India, 25<sup>th</sup>-26<sup>th</sup> February 2018.
- ❖ Synthesis of Renewable Copolyacetals with Tunable Degradation; **poster presentation** at SPSI-MACRO-2018, IISER, Pune, India, 19<sup>th</sup>-22<sup>nd</sup> December 2018.
- ❖ Attended Humboldt Kolleg 2018 during 31<sup>th</sup> Jan-01<sup>th</sup> Feb-2019, at Kashid, Maharashtra, India.

## PUBLICATIONS

### Patents: 02

1. **Rajput, B. S;** Chikkali, S. H. “Isohexide-diacetal based polymers and a process thereof”
  - a) WO2014181358, 13/11/2014.
  - b) IN 1386/DEL/2013, 12/12/2014.
  - c) Granted in EP (EP2994494B1)], 14/06/2017.
  - d) Granted in DE 2994494, 14/06/2017.
  - e) Granted in FR 2994494, 14/06/2017.
  - f) Granted in GB 2994494, 14/06/2017.
  - g) Granted in US (US9815934B2), 14/11/2017.

2. **Rajput, B. S.**; Chikkali, S. H.; Shanmuganathan, K.; Ram, F. "An isohexides-dioxalate compound, its polymers and application thereof"
  - a) WO 2019/012560 A4, 17/01/2019.
  - b) IN 201711024522, 15/03/2019.

### Research Papers: 05

1. **Rajput, B. S.**; Gaikwad, S.; Menon, S. K.; Chikkali, S. H "Sustainable polyacetals from isohexides" *Green Chem.* **2014**, *16*, 3810-3818(Impact Factor 8.586).
2. **Rajput, B. S.**; Chander, U.; Arole, K.; Stempfle, F.; Menon, S. K.; Mecking, S.; Chikkali, S. H. "Synthesis of renewable copolyacetals with tunable degradation" *Macromol. Chem. Phys.* **2016**, *217*, 1396-1410(Impact Factor 2.492).
3. **Rajput, B. S.**; Lekshmy, K.G.; Menon, S. K.; Chikkali, S. H "Synthesis of isohexides-di (ether-ene)s and ADMET polymerization" *Green Material* **2017**, *5*, 1-43(Impact Factor 1.344).
4. **Rajput, B. S.**; Ram, F.; Menon, S. K.; Shanmuganathan, K.; Chikkali, S. H. "Cross-metathesis of bio-renewable dioxalates and diols to film forming degradable polyoxalates" *J. Polym. Sci., Part A: Polym. Chem.* **2018**, *56*, 1584-1592(Impact Factor 2.499).
5. **Rajput, B. S.**; Pawal, S. B.; Bodhke, D.; Nagamalleswara Rao. I.; Sessa Sainath, A. V.; Chikkali, S. H. "Renewing Polyethylene: Insertion Copolymerization of Sugar Derived Hydrophilic Monomers with Ethylene" Just accepted, *Eur. Polym. J.* May **2020**, EPJ 109775 (Impact Factor 3.760).

### PERSONAL PROFILE

Name : Bhausaheb Shivaji Rajput  
Date of Birth : 22<sup>nd</sup> June 1986  
Marital Status : Married  
Gender : Male  
Nationality : Indian  
Passport Number : M8218404

### REFERENCES

#### Dr. Samir H. Chikkali

Principal Scientist,  
Polymer Science and Engineering Division  
CSIR-National Chemical Laboratory  
Dr. Homi Bhabha Road  
Pune-411008, India.  
Mob: 09765462176; Phone: 02025903145  
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#### Dr. Ashootosh Ambade

Senior Scientist,  
B102 PAML, Polymer Science and  
Engineering Division, CSIR-National  
Chemical Laboratory Dr. Homi Bhabha  
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#### Dr. Prakash P. Wadgaonkar

Emeritus Scientist,  
Polymer Science and Engineering Division,  
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Signature

