



KUNAL KHUSHAL WADGAONKAR

PH.D. (TECH), POLYMER
ENGINEERING AND
TECHNOLOGY

CONTACT INFO

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PROFICIENCY

- Synthesis of Polyesters, Acrylic and silane based hybrid resins and corrosion resistant formulations, synthesis of emulsion, Micro-encapsulation, Blends & Composites, Compounding of additives, Coating, Casting, Hand-lay up, Compression molding, Extrusion, two roll mill,

-Instrumental handling, analysis and interpretation of FT-IR, DSC, UV spectroscopy, Color Spectrophotometer, Optical Microscopy, Coniometer, Particle Size Analyzer, Universal Testing Machine, MFI, TGA, GPC.

EXPERIENCE

Manager - Organic Coating Division, Artek Surfin Chemicals Ltd, Mumbai (April 2022 - present)

EDUCATION

Ph. D. (Tech), Polymer Engineering and Technology

Institute of Chemical Technology (2018 - 2022)

Research Topic (sponsored by Board of Research in Nuclear Science, DAE):

Development of Plasticizer for the melt processing of guar gum for biodegradable films

M. Tech, Polymer Engineering and Technology

Institute of Chemical Technology (2016-2018)

CGPA: 9.16

Research Topic:

Enzymatic degradation of Polyethylene Terephthalate by Lipase enzyme

B. Tech, Polymer Engineering and Technology

College of Engineering and Technology, Akola (2012-2016)

CGPA: 9.32

Research Topic:

High performance fly ash- epoxy composite

PROJECT EXPERIENCE

- Acrylic resin for electroplating for corrosion protection of metals - **Artek Surfin Chemicals Ltd.**
- Acrylic emulsion for top coat after zinc passivation - **Artek Surfin Chemicals Ltd.**
- Development of Plasticizer for melt processing of Guar gum for biodegradable films - **Board of Research in Nuclear Science, DAE.**
- Development of Rosin based tackifier for adhesives - **New Era Adhesive & Sealants**
- PVC blown film extrusion and printing - **Vaibhav Plasto Printing & Packaging Pvt. Ltd.**

PUBLICATIONS

- Synthesis and characterization of high bio-based content unsaturated polyester resin for wood coating from itaconic acid: Effect of various reactive diluents as an alternative to styrene, L. B. Mehta, **K. K. Wadgaonkar**, R. N. Jagtap, **Journal of Dispersion Science and Technology** 40 (5), 756-765
- Solvent-free microwave-assisted synthesis and characterization of polybenzoxazine as a thermochromic material for smart coatings, L Mehta, **K Wadgaonkar**, M Suryawanshi, R Jagtap, **Colloid and Polymer Science** 297 (5), 795-798
- Microstructural, thermal and rheological correlations to mechanical response of polyamide-6 (glass filled)/polyetherimide blend: effect of ethylene-octene copolymer on toughening of blend, RN Jagtap, LB Mehta, **KK Wadgaonkar**, PB Bamane, PK Ramamoorthy, **Journal of Materials Science** 53 (16), 11378-11392
- Enhancement of mechanical and barrier properties of LLDPE composite film via PET fiber incorporation for agricultural application, PR Kumar, **K Wadgaonkar**, L Mehta, R Jagtap, **POLYMERS FOR ADVANCED TECHNOLOGIES** 30 (5), 1251-1258
- Influence of ethylene-methacrylic acid copolymer on thermo-mechanical, morphological and rheological properties of recycled PET/SEBS blend, RN Jagtap, **KK Wadgaonkar**, LB Mehta, **Fibers and Polymers** 20 (7), 1323-1332.
- Effect of carbonized watermelon rind powder on the mechanical and thermal properties of unsaturated polyester composites: A special insight to chemical resistance and value addition, **KK Wadgaonkar**, LB Mehta, PB Bamane, R Pon Kumar, RN Jagtap, **Advances in Polymer Technology** 37 (8), 3421-3431
- Replacement of traditional unsaturated acid by bio-based itaconic acid in the preparation of isophthalic acid-based unsaturated polyester resin, PB Bamane, **KK Wadgaonkar**, SU Chambhare, LB Mehta, RN Jagtap, **Progress in Organic Coatings** 147, 105743
- Post Harvest Packaging of Food Products for Enhancing Food Quality and Safety, **KK Wadgaonkar**, RN Jagtap, **Indian Association of Nuclear Chemists and Allied Scientists**, 6

- The effect of partial replacement of maleic anhydride by itaconic acid in sebacic acid-based unsaturated polyester on its various properties, PB Bamane, **KK Wadgaonkar**, KK Srivastava, RN Jagtap, **Journal of Polymer Research** 374 (29), 1-14
- Studies of mechanical, thermal and electrical properties of guar gum/ carbon black composites, **K Wadgaonkar**, S Maiti, R Adivarekar, R Jagtap, **Research Journal of Chemistry and Environment** 26 (9) 41-48

AWARDS & HONORS

- -Coordinator at Rangotsav - **Institute of Chemical Technology**
- -Award of Excellence - **College of Engineering and Technology, Akola**
- John Berzelius Excellence award - **College of Engineering and Technology, Akola**
- Coordinator of Technical event Polychem 14 - **College of Engineering and Technology, Akola**

PRESENTATIONS & SEMINARS

- Poster presentation on the topic "antifouling coatings" at **Polychem'14** in 2014
- Presented a paper on the topic "Preparation of biobased unsaturated polyester resin using bio-sourced Sebacic and Itaconic acid" at **JSS-International Conference on Advanced Materials & Technology** in 2020

SKILLS & INTERESTS

- **INTERESTS**
- Playing violin, Bonsai making, Sketching
- **LANGUAGES**
- English, Hindi, Marathi

DECLARATION

I hereby declare that to the best of my knowledge the above-mentioned information is correct and complete.

Thanking you,

LINKS



<https://www.linkedin.com/in/kunal-wadgaonkar-72b6b8a3/>



<https://www.researchgate.net/scientific-contributions/Kunal-K-Wadgaonkar-2142585370>



<https://scholar.google.com/citations?user=a9b7Gw0AAAAJ&hl=en>

REFERENCES

Prof. (Dr.) R. N. Jagtap

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Prof. (Dr.) P. V. Thorat

College of Engineering & Technology, Akola
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