

Profile Page



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Research Interests :

1. Thin Film Polymeric Coatings
2. Antimicrobial Coatings
3. Antidust Coatings
4. Fire Retardant Coatings
5. Anti-Fouling Coatings
6. Anticorrosion Coatings
7. Surfactant Enhanced Drying of Polymeric Coatings
8. Polymeric Sensors
9. Renewable Hydrogen Production
10. Modeling & Simulation Using MATLAB
11. Process Engineering
12. Confocal Raman Spectroscopy
13. Finite Element Formulation
14. Finite Difference Formulation
15. MATLAB Programming

Other Profile Links :

Google Scholar Link :

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Scopus Profile [Click Here](#)

Researcher ID [Click Here](#)

Vidwan ID [Click Here](#)

Personal Homepage [Click Here](#)

Journal Publications :

Year	Journal	Publication
2023	Separations, 10, 133	Neha Maheshwari, Raj Kumar Arya, George D. Verros, Pradip B. Dhamole, and Ashwin Kannan, 2023, “Surfactant-Enhanced Extraction of Lutein from Marigold Petals using an Aqueous Two-Phase System”, Separations, 10, 133, Accepted on February 13, 2023 Published on February 15, 2023, https://doi.org/10.3390/separations10020133
2022	Electronics, 11(22), 3791	Himanshu Gupta, Parul Jindal, Om Prakash Verma, Raj Kumar Arya, Abdelhamied A. Ateya, Naglaa F. Soliman , Vijay Mohan, 2022, “Computer Vision-Based Approach for Automatic Detection of Dairy Cow Breed”, Electronics, 11(22), 3791, Accepted on November 16, 2022, Published online on November 18, 2022,
2022	Drug Delivery and Translational Research	Rahul Kumar, Amit K. Thakur, Gergely Kali, Kancharlapalli Chinaraa Pitchaiah, Raj Kumar Arya, Anurag Kulabhi, 2022, “Particle preparing of pharmaceutical compounds using supercritical antisolvent process: current status and future perspectives”, Drug Delivery and Translational Research, Accepted on December 9, 2022, Published online on December 27, 2022
2022	Axioms 2022, 11, 104, Accepted on February 23, Published on February 25, 2022.	Raj Kumar Arya and George D. Verros , “On the Validity of Onsager Reciprocal Relations (ORR) for Heat Transfer in Anisotropic Solids”.
2022	Drug Delivery and Translational Research, Accepted on July 30, 2022, Published online on August 11, 2022,	Rahul Kumar, Amit Kumar Thakur, Nilanjana Banerjee, Ashutosh Kumar Gajendra Kumar, Gaurav , and Raj Kumar Arya, 2022, “Liquid Antisolvent Crystallization of Pharmaceutical Compounds: Current Status And Future Perspectives”
2022	Progress in Organic Coatings , 173, 107216 Accepted on September 19, 2022, Published online on September 30, 2022,	Devyani Thapliyal, G D Verros, Raj Kumar Arya, 2022, “A Study on Residual Solvent, Crystallinity and Thermal Properties of Poly(styrene)-Poly(methyl methacrylate)-Toluene Coatings”, Progress in Organic Coatings , 173, 107216 Accepted on September 19, 2022, Published online on September 30, 2022,
2022	Coatings, 12, 1582, Accepted on October 17, 2022, Published on October 19, 2022 https://doi.org/10.3390/coatings12101582 .	Raj Kumar Arya, Devyani Thapliyal, George D. Verros , Neetu Singh, Dhananjay Singh, Rahul Kumar, Rajesh Kumar Srivastava, Anurag Kumar Tiwari, 2022, “On The Validity of Linearity Axiom in Multi-Component Diffusion and Heat Transfer”, Coatings, 12, 1582, Accepted on October 17, 2022, Published on October 19, 2022 , https://doi.org/10.3390/coatings12101582 .
2022	Chemical and Process Engineering, 43 (2), 183–191, Accepted on April 6, 2022, DOI: 10.24425/cpe.2022.140821	Avinash Chandra , Heena Rekhi , Dharmender , Arivind Kumar Gautam , Raj Kumar Arya, 2022, “ Enzyme-assisted turmeric oil extraction from turmeric rhizomes”, Chemical and Process Engineering, 43 (2), 183–191, Accepted on April 6, 2022, DOI: 10.24425/cpe.2022.140821

2022	Bulgarian Chemical Communications, 53, D , 62-72, DOI: 10.34049/bcc.53.D.33, http://www.bcc.bas.bg/BCC_Volumes/Volume_53_Special_D_2021/bcc-53-d-2021-62-72-arya.pdf	Aman Pathaniya , Devyani Thapliyal, Raj Kumar Arya, 2021, “Reduction and Biosorption of Hexavalent Chromium Ions From Wastewaters: A Review”
2022	Chemical and Process Engineering, 43(2), 229-242, Accepted on April 6, DOI: 10.24425/cpe.2022.140826	Raj Kumar Arya, Ghanshyam Meena, Devyani Thapliyal, Sanghamitra Barman, Gopinath Halder, Pooja Shandilya, 2022, “Low-Cost Removal of Basic Red 9 Using Cow Dung Ash”, 43(2), 229-242, Accepted on April 6, DOI: 10.24425/cpe.2022.140826
2022	Chemosphere, 288(3), 132609, Accepted on October 17, 2021, Available online on October 20, 2021,	Aanchal Rathi, Sanghamitra Barman, Soumen Basu, Raj Kumar Arya, “Post-fabrication structural changes and enhanced photodegradation activity of semiconductors@zeolite composites towards noxious contaminants”
2022	Biomass Conversion and Biorefinery, Accepted on December 4, 2021, Published online on January 21, 2022,	Shraboni Mukherjee, Biswajit Kamila, Sayanta Paul, Baisakhi Hazra, Somnath Chowdhury, Raj Kumar Arya, Sanghamitra Barman, Gopinath Halder, “Insight into biosorptive uptake of fluoride by chemically activated biochar: experimental modeling and parametric optimization”
2022	Environmental Science and Pollution Research, Accepted on December 29, 2021, Published on January 5, 2022 ,	Deepak Singh, Sunita Singh, Suresh Kumar Patel, Shishir Sinha, Raj Kumar Arya, Dhananjay Singh, “Experimental investigation of different?shaped microwave?heated potatoes: thermal and quality characteristics analysis for food preservation”
2022	Chemical Engineering & Technology, Accepted on December 30, 2021, Published online on December 31, 2021,	Smitarani Pati,Om Prakash Verma,Raj Kumar Arya,Anurag Kumar Tiwari, “Transient Modeling and Simulation of a Multiple-Stage Evaporator in the Paper Industry”,
2022	Chemical Engineering & Technology, Accepted on December 30, 2021, Published online on December 31, 2021,	Meenakshi Sheoran, Avinash Chandra, Arvind Kumar Gautam, Raj Kumar Arya, Haripada Bhunia, Harish J. Pant, “Comparative Study of Two Identical Industrial Digesters Using Radiotracer- Based Residence Time Distribution Measurement”
2022	Coatings, 12, 186, Accepted on January 26, 2022, Published online on January 31, 2022	Meenakshi Kumawat, Devyani Thapliyal, George D. Verros, Raj Kumar Arya, Sanghamitra Barman, Gopinath Halder and Pooja Shandilya, “PANI-Based Hydrogen Sulfide Gas Sensors”
2022	Environmental Science and Pollution Research, Accepted on January 26, 2022, Published online on February 14, 2022	Gurleenjot Kaur, Neetu Singh, Anita Rajor, Raj Kumar Arya, 2022, “Removal of doxycycline hypochloride from aqueous solution by rice husk ash using response surface methodology and disposability study”
2022	Materials Today: Proceedings	Rahul Gupta, Mehak Sharma, Vishakha Jangir, Arvind K. Gautam, Avinash Chandra, Raj Kumar Arya, “A theoretical and mathematical study on the importance of petroleum derivatives in the production of sanitizer based products”
2021	Coatings, 11(9), 1049; Accepted on August 24, 2021, Published on August 30, 2021,	Raj Kumar Arya ¹ , Devyani Thapliyal, Jyoti Sharma, G. D. Verros, “Glassy Polymers – Diffusion, Sorption, Ageing, and Applications”
2021	International Journal of Hydrogen Energy, Accepted on August 27, 2021, Published online on September 15, 2021	Pooja Shandilya, Rohit Sharma, Raj Kumar Arya, Amit Kumar, Dai-Viet N. Vo, Gaurav Sharma, “Recent Progress And Challenges In Photocatalytic Water Splitting Using Layered Double Hydroxides (LDH) Based Nanocomposites”
2021	The European Physical Plus, 136, 1138, Accepted on October 26, 2021, Published online on November 13, 2021.	Devyani Thapliyal, Raj Kumar Arya , George D. Verros, “On the multi-component diffusion in the linear region of the extended thermodynamics framework”

2021	Coatings, 11, 1529, Accepted on December 8, 2021, Published on December 12, 2021	Raj Kumar Arya , Jyoti Sharma , Rahul Shrivastava , Devyani Thapliyal and George D. Verros, “Modeling of Surfactant-Enhanced Drying of Poly(styrene)-p-xylene Polymeric Coatings Using Machine Learning Technique”,
2021	Healthcare, 9, 1766, Accepted on December 16, 2021, Published on December 20, 2021,	Raj Kumar Arya , George D. Verros and Devyani Thapliyal, “Towards a Mathematical Model for the Viral Progression in the Pharynx”
2021	Progress in Organic Coatings, 150, 106001	Raj Kumar Arya, Harmandeep Kaur, Manju Rawat , Jyoti Sharma , Avinash Chandra, Sanjeev Ahuja, “Influence of Plasticizer (Triphenyl Phosphate) Loading on Drying of Binary Coatings: Poly(Styrene)-p-Xylene Coatings”
2021	Journal of Applied Polymer Science, e50888 (1-15)	Raj Kumar Arya, Jasmine Kaur, Avinash Chandra, Jyoti Sharma, Manju Rawat, Sanjeev Ahuja, "Designing of Biodegradable Polycaprolactone – Binary and Ternary Coatings to Minimize the Defects and Cost of Solvent(s)"
2021	Drying Technology	Raj Kumar Arya, D. Giribabu, Jyoti Sharma , Manju Rawat , , Avinash Chandra, Sanghamitra Barman, “Effect of Surfactant on Drying & Rheology of Poly(vinyl alcohol) - Water Coatings”
2021	International Polymer Processing, 36 (5), 545-556	Arman Hamza, Raj Kumar Arya, Abhijit Dinkar Palsodkar, Gopala Ram Bhadu, S.J.A. Rizvi , “Influence of Crystal Structure on Thermo-Mechanical Properties of Injection Molded ?-Nucleated iPP ”
2020	Journal of Indian Chemical Society, 97, 403-408	Meenakshi Sheoran , Navjot Kaur , Avinash Chandra , Arvind Kumar Gautam ,Raj Kumar Arya, “ Pilot-scale Soda Pulping of Wheat Straw Using Continuous Pulp Digester”
2019	Progress in Organic Coatings, 135, 622-628	A Comprehensive Model For The Drying of Glassy Polymer Coatings: The Low Solvent Concentration Area of The System Poly(Styrene)/p-Xylene
2019	Progress in Organic Coatings, 132, 343–352	Anubhav Prashar, Jyoti Sharma, Sanjeev Ahuja, Avinash Chandra, Raj Kumar Arya, “Quaternary Polymeric Coating An Alternative to Minimize the Use of Single Solvent: Poly(methyl methacrylate) – Ethylbenzene – Toluene – Acetone System”
2019	Progress in Organic Coatings,132, 468- 474	Jyoti Sharma, Sanjeev Ahuja, Raj Kumar Arya, “Effect of Molecular Weight on Morphology and Thermal Properties of Poly(Styrene)-Poly(Methyl Methacrylate)-Ethylbenzene Coatings”
2019	Progress in Organic Coatings, 134, 219 – 225	Jyoti Sharma, Raj Kumar Arya, G. D. Verros, “A Unified Model For The Drying of Glassy Polymer Coatings”
2019	Progress in Organic Coatings, 134, 119 – 125	Jyoti Sharma, Sanjeev Kumar Ahuja, Raj Kumar Arya, “Effect of Molecular Weight on Residual Solvent and Other Parameters in Polymer-Polymer-Solvent Coatings: Poly(Styrene) – Poly(Methyl Methacrylate)-Ethylbenzene System”
2019	Progress in Organic Coatings, 134, 297 – 302	Jyoti Sharma, Sanjeev Ahuja, Raj Kumar Arya, “Depth Profile Study of Poly(styrene) – Poly(methyl methacrylate) – Tetrahydrofuran Coatings”, , https://doi.org/10.1016/j.porgcoat.2019.05.016 , Accepted on 10 May 2019,
2019	Indian Chemical Engineer	Yashika Raparia, Gopinath Halder, Raj Kumar Arya, Sanghamitra Barman, “Catalytic Performance of Modified Beta Zeolite On The Synthesis of Styrene and Xylene: A Kinetic Study”, DOI:10.1080/00194506.2019.1670741
2019	Progress in Organic Coatings, 127, 319-329	Anubhav Prashar, Jyoti Sharma, Sanjeev Ahuja, Avinash Chandra, Raj Kumar Arya, “Quaternary Polymeric Coating as an Alternative to Minimize the Use of Costly or Toxic Solvents: Poly(styrene) – Ethylbenzene – Toluene – p-Xylene System”.

2019	Progress in Organic Coatings, 128, 181-195	Jyoti Sharma, Sanjeev Ahuja, Raj Kumar Arya, "Experimental Designing of Polymer-Polymer-Solvent Coatings: Poly(styrene)-Poly(ethylene glycol)-Chlorobenzene Coating".
2019	Progress in Organic Coatings, 127, 401-407	Ishita Sharma, Jyoti Sharma, Sanjeev Ahuja, Raj Kumar Arya, "Optimization of Sodium Dodecyl Sulphate Loading in Poly(Vinyl Alcohol)-Water Coatings".
2018	Applied Nanoscience, 8(8), 2077-2092	Shekhar Agnihotri, Devendra Sillu, Garima Sharma, Raj Kumar Arya, "Photocatalytic and Antibacterial Potential of Silver Nanoparticles Derived from Pineapple Waste: Process Optimization and Modeling Kinetics for Dye Removal"
2018	Progress in Organic Coatings, 125, 32-39	Harleen Kaur, Jyoti Sharma, Divyansh Jindal, Raj Kumar Arya, Sanjeev Kumar Ahuja, and Shashi Bhushan Arya, "Crosslinked Polymer Doped Binary Coatings for Corrosion Protection"
2018	Progress in Organic Coatings, 125, 443-452	Daisy Sharma, Jyoti Sharma, Raj Kumar Arya, Sanjeev Ahuja, "Surfactant Enhanced Drying of Water-based Polymeric Coating"
2018	Chemical Engineering & Technology, 41, 4, 875-882	Sanjeev Ahuja, Raj Kumar Arya, "Laplace Transform Treatment for Chemical Engineering Systems: Whether to Use 0? or 0+?"
2018	Reviews in Chemical Engineering, 34, 3, 427 - 453	Kshitij Tewari, Gaurav Singhal, and Raj Kumar Arya, "Adsorption Removal of Malachite Green Dye from Aqueous Solution"
2018	Progress in Organic Coatings, 114, 78-89	Aman Pathania, Jyoti Sharma, Raj Kumar Arya, Sanjeev Ahuja, "Effect of Crosslinked Polymer Content on Drying of Binary Polymer—Solvent Coatings"
2018	Journal of Porous Materials, , Accepted on 3 December 2018.	Jyoti Sharma, Sanjeev Ahuja, Raj Kumar Arya, "Drying Induced Phase Separation in Poly(styrene)-Poly(ethylene glycol)-Chlorobenzene System".
2017	Progress in Organic Coatings, 113, 200 - 206	Jyoti Sharma, Raj Kumar Arya, Sanjeev Ahuja, Chitresh Kumar Bhargava, "Residual Solvent Study In Polymer - Polymer - Solvent Coatings: Poly(styrene) - Poly(methyl methacrylate) - Tetrahydrofuran Coatings"
2017	Progress in Organic Coatings, 111, 83 - 92	Jyoti Sharma, Kshitij Tewari, Raj Kumar Arya, "Diffusion in Polymeric Systems - A Review on Free Volume Theory"
2017	Chemical Engineering & Technology, 40, 9, 1630 - 1637	Sanjeev Ahuja and Raj Kumar Arya, "Comparison of The Performances of Different Reduced Forms of a Condenser Model"
2017	Chemical Engineering & Technology, 40, 1, 39 - 49	Chitresh Kumar Bhargava and Raj Kumar Arya, "Simplified MATLAB Solution Schemes for Heat Transfer Equations"
2017	Progress in Organic Coatings, 105, 149 - 162	Aman Pathania, Raj Kumar Arya, Sanjeev Ahuja, "Crosslinked Polymeric Coatings: Preparation, Characterization, and Diffusion Study"
2016	Progress in Organic Coatings, 95, 8 - 19	Raj Kumar Arya, Kshitij Tiwari, Sakshi Shukla, "Non-Fickian Drying of Binary Polymeric Coatings: Depth Profiling Study Using Confocal Raman Spectroscopy"
2015	Separation Science & Technology, 50, 9, 1310 - 1320	Abhi Sharma, Anmol Sharma and Raj Kumar Arya, "Removal of Mercury(II) Ions from Aqueous Solution - A Review of Recent Work"
2015	Chemical Engineering & Technology, 38(3), 530 - 536	Kshitij Tiwari, Sumit Agrawal, and Raj Kumar Arya, "Generalized Pinch Analysis Scheme Using MATLAB"
2015	Progress in Organic Coatings, 78, 155 - 167	Raj Kumar Arya and Chitresh Kumar Bhargava, "Simulation Analysis of Drying of Ternary Polymeric Solution Coatings"
2015	Drying Technology, 33, 1, 92 - 102	Chitresh Kumar Bhargava and Raj Kumar Arya, "Design of Binary Polymeric Coatings for Minimizing the Residual Solvent Part I: Experimentation"
2014	Drying Technology, 32(14), 1727 - 1740	Udit Mohan Singhal, Rahul Dixit and Raj Kumar Arya, "Drying of Multilayer Polymeric Coatings Part I: An Experimental Study"

2014	Drying Technology, 32(8), 992 – 1002	Raj Kumar Arya, “Measurement of Concentrations Profiles in Thin Film Binary Polymer-Solvent Coatings Using Confocal Raman Spectroscopy: Free Volume Model Validation”
2014	Indian Journal of Pharmaceutical Education and Research, 48(1), 61–68	Raj Kumar Arya, “Characterization of Bio-Active Nanoparticles – Bhasma An Ayurvedic Drug”,
2013	South African Journal of Chemical Engineering, 18, 1, 30 – 40	Raj Kumar Arya, “Phase Separation in Multicomponent Polymer – Solvent – Nonsolvent Coatings”
2013	Computers and Chemical Engineering, 50, 5,152-183	Raj Kumar Arya, “Finite Element Solution of Coupled-Partial Differential and ordinary Equations in Multicomponent Polymeric Coatings”
2013	Journal of Applied Polymer Science, 126, 6, 3906 - 3918	Raj Kumar Arya and Madhu Vinjamur, “Measurement of Concentration Profiles Using Confocal Raman Spectroscopy in Multicomponent Polymeric Coatings – Model Validation”
2012	Polish Journal of Chemical Technology, 14, 4, 83-87	Jitendra Katariya and Raj Kumar Arya, “Drying of Binary Thin Film Polymeric Coatings: An Experimental Study”
2012	Journal of Polymer Engineering, 32, 8-9, 463-473	Raj Kumar Arya and Madhu Vinjamur, “Sensitivity Analysis of Free-Volume Theory Parameters in Multicomponent Polymer-Solvent-Solvent Systems”
2012	International Journal of Renewable Energy Research, 2(2), 289-294	Raj Kumar Arya, “Photoelectrochemical Hydrogen Production Using Visible Light”
2011	International Journal of Chemical Engineering and Applications, 2(6), 421-424	Raj Kumar Arya, “Calibration Curves to Measure Concentrations in Multicomponent Polymeric Coatings Using Confocal Raman Spectroscopy”
2009	Industrial & Engineering Chemistry Research, 48(23), 10504-10514	Raj Kumar Arya and Madhu Vinjamur, “Near –Optimization of Operating Conditions and Residence Time in Multi-zone Dryers for Polymer Coatings”

Conference Publications :

Year	Conference	Publication
2022	International Conference on “ Chemical, Bio & Environmental Engineering”, February 13-14, Department of Chemical Engineering, Dr. B.R. Ambedkar NIT Jalandhar, Punjab, India.	Alina bharti, Aman Pathania, D. Giribabu,Raj Kumar Arya, “Effect of Polyols on Rheology of PVA-Water Based Coatings”.
2020	International Conference on “ Chemical, Bio & Environmental Engineering”, February 13-14, Department of Chemical Engineering, Dr. B.R. Ambedkar NIT Jalandhar, Punjab, India.	Rashi Shankar Srivastava, Aman Pathania and D. Giribabu, Raj Kumar Arya, “Instability of Plane Couette Flow In Shear Thinning Fluids Over A Gel”,
2020	International Conference on “ Chemical, Bio & Environmental Engineering”, February 13-14, Department of Chemical Engineering, Dr. B.R. Ambedkar NIT Jalandhar, Punjab, India.	Randeep Singh, Aman Pathania, D. Giribabu,Raj Kumar Arya, “Effect of Different Surfactants on Rheology of Pva-Water Based Coatings”.
2020	International Conference on “ Chemical, Bio & Environmental Engineering”, February 13-14, Department of Chemical Engineering, Dr. B.R. Ambedkar NIT Jalandhar, Punjab, India.	Meenakshi Sheoran , Navjot Kaur , Avinash Chandra , Arvind Kumar Gautam ,Raj Kumar Arya, “ Pilot-scale Soda Pulping of Wheat Straw Using Continuous Pulp Digester”.
2018	CHEMCON 2018, Dec 27 – 30, Dr. B. R. Ambedkar NIT, Jalandhar, Punjab, India.	Jyoti Sharma, Sanjeev Ahuja, and Raj Kumar Arya, “Effect of Molecular Weight on Residual Solvent in Poly(Styrene)-Poly(Methyl Methacrylate)-Ethylbenzene Coatings”

2016	CHEMCON 2016, Dec 27 – 30, Anna University, Chennai, India.	Aman Pathania and Raj Kumar Arya, “Residual Solvent Study During the Drying of Crosslinked Polymeric Coatings”
2015	CHEMCON 2015, Dec 27-30, IIT Guwahati, Assam, India.	Chitresh Kumar Bhargava and Raj Kumar Arya, “Polymer – Polymer – Solvent Coatings”
2015	CHEMCON 2015, Dec 27-30, IIT Guwahati, Assam, India.	Kshitij Tiwari , Sakshi Shukla , and Raj Kumar Arya, “Generalized Pinch Analysis Scheme Using MATLAB: Number of Heat Exchanger & Their Heating and Cooling Loads”,
2014	CHEMCON 2014, Dec 27-30, UICET Chandigarh, Punjab, India.	Chitresh Kumar Bhargava and Raj Kumar Arya, “Simulation Analysis of Drying of Ternary Solution Coatings”
2014	CHEMCON 2014, Dec 27-30, UICET Chandigarh, Punjab, India.	Kshitij Tiwari and Raj Kumar Arya, “A Simple and Practical Approach For Determining Pinch Temperatures and Utility Requirement Using MATLAB”
2013	CHEMCON-2013, Dec 27-30, UICT Mumbai, India.	Udit Mohan Singhal, Rahul Dixit, and Raj Kumar Arya, “Drying of Multilayer Polymeric Coatings: Experimental Study”
2012	National conference on “Recent Advances in Chemical Engineering (RACE-2012)”, February 4, University Department of Chemical Technology, North Maharashtra University, Jalgaon, Maharashtra, India.	Jitendra Katariya and Raj Kumar Arya, “Drying of Binary Thin Film Polymeric Coatings: Experimental Validation”,
2010	15th International Coating Science and Technology Symposium, September 12-15, St. Paul, MN, USA.	Raj Kumar Arya and Madhu Vinjamur, “Non-Fickian Transport in Binary Polymer Coatings”
2010	International Conference on System Dynamics and Control –ICSDC, August 19 – 22 , MIT Manipal, Karnataka, India.	Raj Kumar Arya and B. Vishwanath Sasank, “Finite Element Formulation of Transport Equations in Multicomponent Polymeric Coatings and Optimization of Free Volume Theory Parameters”
2008	14th International Coating Science and Technology Symposium, September 7-10, Marina del Rey, California.	Raj Kumar Arya and Madhu Vinjamur, “Depth Profiling of Multicomponent Coatings to Test Theories of Diffusion”

Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISS N No.	Year
Book	Drying of Crosslinked Binary Polymeric Coatings	LAP LAMBERT Academic Publishing	Aman Pathania, Raj Kumar Arya, Jyoti Sharma	9786203464252	2021
Book	Drying of Quaternary Coatings	LAP LAMBERT Academic Publishing	Anubhav Prashar, Raj Kumar Arya, Sanjeev Kumar Ahuja	9786203464245	2021
Book	Drying of Binary Thin Film Polymeric Coatings	LAP LAMBERT Academic Publishing	Jitendra Katariya, Raj Kumar Arya	9786203464283	2021
Book	Drying of Polymer - Polymer-Solvent Coatings	LAP LAMBERT Academic Publishing	Jyoti Sharma, Raj Kumar Arya, Sanjeev Kumar Ahuja	9786203464238	2021

Book Chapter	Removal of Endocrine-Disrupting Compounds by Wastewater Treatment"	Springer, Cham	Gargi Sinha Sarkar, Aanchal Rathi, Soumen Basu, Raj Kumar Arya, G. N. Halder, Sanghamitra Barman, 2021, " In: Roy S., Garg A., Garg S., Tran T.A. (eds) Advanced Industrial Wastewater Treatment and Reclamation of Water. Environmental Science and Engineering, November 21, 2021, https://doi.org/10.1007/978-3-030-83811-9_7 .	9783030838119	2021
Book Chapter	Polymer Coatings Methods	Taylor & Francis / CRC Press	Daisy Sharma, Manju Rawat, Jyoti Sharma, Raj Kumar Arya, Sanjeev Kumar Ahuja	9780429199226	2020
Book Chapter	Jyoti Sharma, Manju Rawat, Daisy Sharma, Sanjeev Kumar Ahuja, and Raj Kumar Arya	Taylor & Francis / CRC Press	Morphology of polymeric coatings, Polymer Coatings: Technologies and Applications	9780429199226	2020
Book Chapter	Spectroscopy of Polymeric Coatings, Polymer Coatings: Technologies and Applications	Taylor & Francis / CRC Press	Jyoti Sharma, Manju Rawat, Daisy Sharma, Sanjeev Kumar Ahuja, and Raj Kumar Arya	9780429199226	2020
Book Chapter	Introduction to Polymeric Coatings, Polymer Coatings: Technologies and Applications	Taylor & Francis / CRC Press	Manju Rawat, Daisy Sharma, Jyoti Sharma, Raj Kumar Arya, and Sanjeev Kumar Ahuja	9780429199226	2020
Book	Diffusion in Multicomponent Polymeric Coatings	LAP LAMBERT Academic Publishing	Raj Kumar Arya	9783838381565	2010

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
Principal Investigator	Extra Mural	Drying of Polymer – Polymer – Solvent Coatings: Experimental and Simulation Study	Science & Engineering Research Board - Department of Science & Technology, New Delhi	20-02-2017	19-02-2021	Rs 42.20910	Ongoing	

Events Organized :

Category	Type	Title	Venue	From	To	Designation
Webinar	National	A Webinar on "Heavy Crude Oil Production Technologies- Practical Approach", 8 August 2020, 11:30 hours by Mr. Hemant Kumar Sonkar , Chief Engineer (Production), Asia Pacific BU, ONGC Videsh Ltd., New Delhi.	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab - 144011, India	08-08-2020	08-08-2020	Coordinator
Webinar	National	A Webinar on "Why a Manuscript is Rejected", 27 August 2020, 13:30 hours by Prof. Sakamon Devahastin, Editor Drying Technology - An International Journal.	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab - 144011, India	27-08-2020	27-08-2020	Coordinator
Webinar	National	A Webinar on "IT not only Enabler, But Critical Element of Engineering and Business Operation" 05 September 2020, 11:30 AM, by Mr. Praveen Verma, Global Program Director, Energy and Utilities, Birlasoft India Ltd.	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab - 144011, India	05-09-2020	05-09-2020	Coordinator

Webinar	National	A Webinar on "Process Scale Up - Aspects and Importance" 12 September 2020, 11:30 AM by Mr. Rahul Chaudhari , Senior Manager (Process), Aarti Industries Ltd, Gujarat.	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab - 144011, India	12-09-2020	12-09-2020	Coordinator
Webinar	National	A Webinar on "Hydroprocessing Technologies in Petroleum Refinery" on 19 September 2020, 11:00 AM by Mr. Ravi Kumar, Ex. Manager, IOCL, Faridabad.	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab - 144011, India	19-09-2020	19-09-2020	Coordinator
STC	National	TEQIP-III Sponsored one week Online Short Term Course on “Current Industrial Practices in Chemical Engineering”, October 7 to 11, 2020.	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab - 144011, India	07-10-2020	11-10-2020	Coordinator
Alumni - Student Interaction	National	1st Alumni - Student Interaction on “ Training, Placement, and Career guidance to face the challenging world”, 12th July 2020.	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab - 144011, India	12-07-2020	12-07-2020	Coordinator
Alumni - Student Interaction	National	2nd Alumni - Student Interaction on “Right career path, guidance for right course selection” 7th August 2020.	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab - 144011, India	07-08-2020	07-08-2020	Coordinator
Alumni - Student Interaction	National	3rd Alumni - Student Interaction on “Career as Business and Data Analytics”, 16th August 2020.	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab - 144011, India	16-08-2020	16-08-2020	Coordinator

Online Alumni Meet	National	1st Online Alumni Meet	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab - 144011, India	30-10-2020	30-10-2020	Coordinator
STC	National	TEQIP-III Sponsored one week Online Short Term Course on “Computational Methods and Analysis for Engineers”	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab, India	18-11-2020	22-11-2020	Coordinator
STC	International	Self Sponsored one week Online International Short Term Course on “Current and Future Scope of Surface Coatings”	Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab - 144011, India	2-12-2020	6-12-2020	Coordinator

Conference	International	International Chemical Engineering Conference (100 Glorious Years of Chemical Engineering & Technology) 2021 (ICHEEC 2021), (Virtual Mode)	Department of Chemical Engineering, Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab, India. International Chemical Engineering Conference (100 Glorious Years of Chemical Engineering & Technology) 2021 (ICHEEC 2021), (Virtual Mode), September 16-19, 2021, Jalandhar, Punjab, India. Chief Patron: Prof. Lalit Kumar Awasthi, Director NITJ, Co-patron: Prof. M.K.Jha, President IICHE, India, for 2021, organizing chairman: Dr. Raj Kumar Arya, Associate Professor, the organizing secretaries: Dr. Renu Gupta, Associate Prof. & Head Chemical Engineering and Dr. Anurag Kumar Tiwari, Assistant Professor,	16-09-2021	19-09-2021	Organizing chairman
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Professional Affiliations :

Designation	Organization
Life Member	Indian Institute of Chemical Engineers

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Sarojini Verma (22501007), PhD Scholar	Formulation and Drying Studies of Antimicrobial Packaging Films	Ongoing	2023	

Devyani Thapliyal (21801001), PhD Scholar	Antimicrobial Polymeric Coatings	Ongoing	2021	Dr. G. D. Verros , Aristotle University of Thessaloniki, Greece
Jyoti Sharma, Ph.D. Scholar	Experimental Investigations of Thermal Properties and Depth Profiles During the Drying of Polymer-Polymer-Solvent Coatings	Completed	2020	Dr. Sanjeev Kumar Ahuja, TIET, Patiala
Anubhav Prashar, M. Tech. Scholar	“Drying of Quaternary Coatings of Poly(styrene) and Poly(methyl methacrylate), Department of Chemical Engineering, Thapar Institute of Engineering & Technology, Patiala, Punjab, India	Completed	2018	Dr. Sanjeev Kumar Ahuja, TIET, Patiala
Ishita Sharma, M. Sc. Scholar	“Optimization of Sodium Dodecyl Sulphate Loading in Poly(vinyl alcohol) – Water Coatings”, School of Chemistry and Biochemistry, Thapar Institute of Engineering & Technology, Patiala, Punjab, India	Completed	2018	Dr. Sanjeev Kumar Ahuja, TIET, Patiala
Aman Pathania, M. Tech. Scholar	“ Effect of Crosslinked Polymer on Drying of Binary Polymeric Coatings”, Department of Chemical Engineering, Thapar University, Patiala, Punjab, India.	Completed	2017	
Harleen Kaur, M. Sc. Scholar	“Use of Cross-linked Polymeric Coatings for Corrosion Protection”, School of Chemistry and Biochemistry, Thapar University, Patiala, Punjab, India.	Completed	2017	
Daisy Sharma, M. Sc. Scholar	“Surfactant Enhanced Drying of Waterbased Polymeric Coatings”, School of Chemistry and Biochemistry, Thapar University, Patiala, Punjab, India.	Completed	2017	
Tanisha, M. Sc. Scholar	“Characterization and Kinetic Study of Alkali Catalyzed Synthesis of Polyvinyl Alcohol”, School of Chemistry and Biochemistry, Thapar University, Patiala, Punjab, India	Completed	2017	Dr. Sanjeev Kumar Ahuja, TIET, Patiala
Ghanshyam Meena, M. Tech. Scholar	“Adsorption of Dyes from Aqueous Solution Using Cow Dung”, Department of Chemical Engineering, Jaypee University of Engineering & Technology, Guna, M.P., India.	Completed	2014	
Jitendra Katariya, M. Tech. Scholar	Drying of Binary Thin Film Polymeric Coatings”, Department of Chemical Engineering, Jaypee University of Engineering & Technology, Guna, M.P., India.	Completed	2012	

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Meenakshi Kumawat	“Preparation of Polymeric Chemiresistive Sensor for H ₂ S Gas Detection”, Department of Chemical Engineering, Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab, India.	Completed	2021	
Anubhav Prashar	“Drying of Quaternary Coatings of Poly(styrene) and Poly(methyl methacrylate), Department of Chemical Engineering, Thapar Institute of Engineering & Technology, Patiala, Punjab, India	Completed	2018	Dr. Sanjeev Kumar Ahuja

Ishita Sharma	“Optimization of Sodium Dodecyl Sulphate Loading in Poly(vinyl alcohol) – Water Coatings”, School of Chemistry and Biochemistry, Thapar Institute of Engineering & Technology, Patiala, Punjab, India	Completed	2018	Dr. Sanjeev Kumar Ahuja
Aman Pathania	“ Effect of Crosslinked Polymer on Drying of Binary Polymeric Coatings”, Department of Chemical Engineering, Thapar University, Patiala, Punjab, India.	Completed	2017	
Harleen Kaur	“Use of Cross-linked Polymeric Coatings for Corrosion Protection”, School of Chemistry and Biochemistry, Thapar University, Patiala, Punjab, India.	Completed	2017	
Daisy Sharma	“Surfactant Enhanced Drying of Waterbased Polymeric Coatings”, School of Chemistry and Biochemistry, Thapar University, Patiala, Punjab, India.	Completed	2017	
Tanisha	“Characterization and Kinetic Study of Alkali Catalyzed Synthesis of Polyvinyl Alcohol”, School of Chemistry and Biochemistry, Thapar University, Patiala, Punjab, India(as co-supervisor, Sanjeev Ahuja- Supervisor).	Completed	2017	Dr. Sanjeev Kumar Ahuja
Ghanshyam Meena	“Adsorption of Dyes from Aqueous Solution Using Cow Dung”, Department of Chemical Engineering, Jaypee University of Engineering & Technology, Guna, M.P., India.	Completed	2014	
Jitendra Katariya	“Drying of Binary Thin Film Polymeric Coatings”, Department of Chemical Engineering, Jaypee University of Engineering & Technology, Guna, M.P., India.	Completed	2012	

Patents :

Name	Reg./Ref. No.	Date of Award/Filling	Organization	Status
A method for performing mathematical modeling and validation of polymer - polymer - solvent coating by Raj Kumar Arya and G D Verros	2022/12894	22-02-2023	REPUBLIC OF SOUTH AFRICA	Granted

Admin. Responsibilities :

Position Held	Organization	From	To
M. Tech. Course Moderation Coordinator	Jaypee University of Engineering & Technology, Guna	01-06-2010	14-06-2014
Department Time Table Coordinator	Jaypee University of Engineering & Technology, Guna	01-06-2010	14-06-2014
Ph.D. Entrance Test Paper Coordinator	Jaypee University of Engineering & Technology, Guna	01-06-2010	14-06-2014
National Board of Accreditation (NBA) Report Compilation Member	Thapar University, Patiala	01-08-2014	30-06-2015

National Assessment and Accreditation Council (NAAC) Report Preparation Member	Thapar University, Patiala	01-08-2014	30-06-2015
Department Planning & Policy Committee Secretary	Thapar University, Patiala	01-08-2015	31-05-2016
Member Senate Post Graduate Committee PG Coordinator	Thapar University, Patiala	01-09-2016	31-08-2018
Deputy Registrar Academic (UG)	Dr. B. R. Ambedkar National Institute of Technology, Jalandhar	25-10-2018	
Department Training & Placement Coordinator	Dr. B. R. Ambedkar National Institute of Technology, Jalandhar	25-10-2018	19-09-2022
Department Alumni Coordinator	Dr. B. R. Ambedkar National Institute of Technology, Jalandhar	25-10-2018	19-09-2022
Industry-Academia Interaction Coordinator	Dr. B. R. Ambedkar National Institute of Technology, Jalandhar	25-10-2018	19-09-2022
Expert talk coordinator	Dr. B. R. Ambedkar National Institute of Technology, Jalandhar	25-10-2018	19-09-2022

Award and Honours :

Title	Activity	Given by	Year
3rd Position in poster presentation during CHEMCON 2016 in the category of Polymer/ polymer rheology	Aman Pathania and Raj Kumar Arya, 2016, “Residual Solvent Study During the Drying of Crosslinked Polymeric Coatings”, CHEMCON 2016, Dec 27 – 30, Anna University, Chennai, India.	CHEMCON	2016
Best Undergraduate Research Paper Award For Publishing in Highest Impact Factor Journal	Raj Kumar Arya and Chitresh Kumar Bhargava, 2015, “Simulation Analysis of Drying of Ternary Polymeric Solution Coatings”, Progress in Organic Coatings, 78, 155 – 167, Accepted on 23 September 2014, Published online on 12 October 2014, DOI: 10.1016/j.porgcoat.2014.09.011.	IICHE	2015
2nd Prize	Model making content at Institute Level	Department of Chemical Engineering, HBTI Kanpur, U.P., India.	1999