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### Papers in Conferences

1. Zahra Rahmani, Behzad Shirkavand Hadavand, Saeed Pourmahdian ,The effect of urethane acrylate on the rheological behavior of UV-Curable hydrogel chitosan nanocomposite ,First International Conference on Rheology, Iran ,2019.
2. Behzad Shirkavand Hadavand, Amir Massoud Arab, Yasin Hossaini Jouraki ,Flexible UV curable urethane films as polymer electrolyte in lithium-ion batterie ,International Conference on Polymer Science and Technology, SPSI-MACR, Pune, India ,India ,2018.
3. Nazanin Shohani, Saeed Pourmahdian, Behzad Shirkavand Hadavand ,Response surface methodology for design of porous hollow sphere thermal insulator ,The International Conference on Material, Mechanical, and Manufacturing Engineering, Beijing, China ,China ,2017.
4. B. Shirkavand Hadavand, M. R. Saeb, F. Najafi, A. Malekian ,The effects of synthesis parameters on the microstructure of hyperbranched polyesters ,Polycondensation, Moscow, Russia ,2016.
5. B. Shirkavand Hadavand ,Sonochemical synthesis of UV curable polysulfide thiourethane acrylate nanocomposite ,Organic Chemistry of Sulfur, Germany ,Germany ,2016.
6. S. Kordani, B. Shirkavand Hadavand, S. Pormahdiyan ,Study of porosity in rigid polyurethane foams by different blowing agent ,International conference on research in engineering, science and technology, Georgia ,2016.
7. B. Shirkavand Hadavand , Sh. Mozafari, F. Askari ,Investigation of antibacterial properties of epoxy acrylate/modified nano zinc oxide ,European Polymer Federation (EPF) Congress, Germany ,2015.
8. D. Ghanbari, M. Pishvaei, B. Shirkavand Hadavand.Synthesis and Viscoelastic Properties of UV Cured Polyurethane Acrylate/Silicon Carbide Nanopartilces.International Conference on Nanotechnology: Fundamentals and Applications, Czech Republic.۲۰۱۴.
9. A. Pournamda, S. Mostafa Fatem, F. Najafi, B. Shirkavand Hadavand, S. Gorji Kandi.Synthesis and characterization of a novel trimethoxysilyl-functionalized urethane dimethacrylate (TMSUA) as a hybrid monomer used in light curing dental adhesive.European Polymer Congress (EPF), Italy.۲۰۱۳.
10. B. Shirkavand Hadavand, F. Najafi, A. Mirshokrai, Z. Oskoui Tabrizi.UV-curable epoxy acrylate/ Fe<sup>۳</sup>O<sub>۴</sub> nano hybrid as a smart coatings: Synthesis, characterization and properties.Iran-Belarus International Conference on Modern Applications of Nanotechnology (IBCN۱۲), Belarus.۲۰۱۲.
11. B. Shirkavand Hadavand.Manufacturing polysulfide sealant from heavy end waste: Preparation and rheological behaviors.IUPAC International Conference on Advanced Polymers via Macromolecular Engineering, Turkey.۲۰۱۱.
12. B. Shirkavand Hadavand, F. Najafi, Z. Khoshnevisan.Cationic UV-curable polyurethane dispersion/carbon nanotube composite: Synthesis and characterization.Waterborne Symposium, USA.۲۰۱۱.

13. B. Shirkavand Hadavand, F. Najafi, R. Talani. Nano-SiO<sub>2</sub>/TiO<sub>2</sub> urethane dispersion composite for the application of inkjet printer. Waterborne Symposium, USA, ۲۰۱۱.
14. B. Shirkavand Hadavand, F. Najafi. Investigation of chemical and physical properties of polysulfide polymer coatings. Organic Chemistry of Sulfur, (ISOCs ۲۴), Italy, ۲۰۱۰.
15. F. Gheisar, M. Safi, B. Shirkavand Hadavand, The effects of two types of silicone resins on the color depth of dyed polyester, 8th International Color and Coating Congress, 2021.

## Papers in Journals

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1. M Jouyandeh, B Shirkavand Hadavand, F Tikhani, R Khalili, B Bagheri, P Zarrintaj, et. al., Thermal-Resistant Polyurethane/Nanoclay Powder Coatings: Degradation Kinetics Study, Coatings, 2020.
2. B Shirkavand Hadavand, M Jouyandeh, SMR Paran, R Khalili, H Vahabi, HF Bafghi, et. al., Silane-functionalized Al<sub>2</sub>O<sub>3</sub>-modified polyurethane powder coatings: Nonisothermal degradation kinetics and mechanistic insights, Journal of Applied Polymer Science, 2020.
3. F Tikhani, B Shirkavand Hadavand, H Fakharzadeh Bafghi, M Jouyandeh, et. al., Polyurethane/Silane-Functionalized ZrO<sub>2</sub> Nanocomposite Powder Coatings: Thermal Degradation Kinetics, Coatings, 2020.
4. Mohammadbagher Azizkhani, Javad Kadkhodapour, Ali Pourkamali Anaraki, Behzad Shirkavand Hadavand, Reza Kolahchi, Study of body movement monitoring utilizing nano-composite strain sensors containing Carbon nanotubes and silicone rubber, Steel and Composite Structures, 2020.
5. Behzad Shirkavand Hadavand, Behzad Ghobadi Jola, Khadijeh Didehban, Ahmad Mirshokraie, Modified bitumen emulsion by anionic polyurethane dispersion nanocomposites, Road Materials and Pavement Design, 2020.
6. Abbas Madhi, Behzad Shirkavand Hadavand, Bio-based UV-curable urethane acrylate graphene nanocomposites: synthesis and properties, SN Applied Sciences, 2020.
7. Abbas Madhi, Behzad Shirkavand Hadavand, Eco-friendly castor oil-based UV-curable urethane acrylate zinc oxide nanocomposites: Synthesis and viscoelastic behavior, Journal of Composite Materials, 2020.
8. H. Fakharzadeh Bafghi, B Shirkavand Hadavand, F Najafi, B Ramezanzadeh, Cure Kinetic of Polyurethane/Fluorinated POSS Hybrid, Progress in Color, Colorants and Coatings, 2020.
9. Ali Safinejad, Saeed Pourmahdian, Behzad Shirkavand Hadavand, Emulsifier-free emulsion polymerization of acrylonitrile-butadiene-carboxylic acid monomers: a kinetic study based on polymerization pressure profile, Journal of Dispersion Science and Technology, 2020.
10. MB Azizkhani, Sh Rastgordani, A Pourkamali Anaraki, J Kadkhodapour, B Shirkavand Hadavand, Highly sensitive and stretchable strain sensors based on chopped carbon fibers sandwiched between silicone rubber layers for human motion detections, Journal of Composite Materials, 2020.
11. S Mahvidi, Ch Elles, B Shirkavand Hadavand, Yasushi Yokoyama, F Nourmohammadian, Influence of Protonation on the Photochromic Behavior, Phase Transfer and Thermal Stability of Phenylamine-Substituted Diarylethenes, Progress in Color, Colorants and Coatings, 2020.
12. Behzad Shirkavand Hadavand, Malihe Pishvaei, Mahmood Hosseiniasari, The role of nanoclay on surface roughness and characteristics of epoxy polysulfide nanocomposite, Progress in Organic Coatings, 2019.
13. Ali Safinejad, Saeed Pourmahdian, Behzad Shirkavand Hadavand, A robust computational method based on the thermodynamic approach for determining monomer partitioning in emulsion polymerization systems, Canadian Journal of Chemical Engineering, 2019.
14. F. Laoutid, C. Vagner, M. Cochez, L. Brison, F. Ducos, M. Jouyandeh, B. Shirkavand Hadavand, M. R. Ganjali, M. R. Saeb, H. Vahabi, et al., Flame retardant PP/PA6 blends: A recipe for recycled wastes, De Gruyter, 2019.
15. MB Azizkhani, J Kadkhodapour, Sh Rastgordani, AP Anaraki, B Shirkavand Hadavand, Highly Sensitive, Stretchable Chopped Carbon Fiber/Silicon Rubber Based Sensors for Human Joint Motion Detection, Fibers and Polymers, 2019.

16. M. Jouyandeh, B. Shirkavand Hadavand, H. Vahabi, M. R. Ganjali, K. Formela, M. R. Saeb, et al, Properties of nano-Fe<sub>3</sub>O<sub>4</sub> incorporated epoxy coatings from Cure Index perspective, *Progress in Organic Coatings*, 2019.
17. M. Jouyandeh, M. R. Ganjali, B. Shirkavand Hadavand, M. Aghazadeh, V. Akbari, F. Shammiry, M. R. Saeb, Curing epoxy with polyvinyl chloride (PVC) surface-functionalized Co<sub>x</sub>Fe<sub>3-x</sub>O<sub>4</sub> nanoparticles, *Progress in Organic Coatings*, 2019.
18. P. Zarrintaj, M. Jouyandeh, M. R. Ganjali, B. Shirkavand Hadavand, M. R. Saeb, et al, Thermo-sensitive polymers in medicine: A review, *European Polymer Journal*, 2019.
19. Abbas Madhi, Behzad Shirkavand Hadavand. Chemical treatment of cotton fabric by eco-friendly carbon quantum dots-chitosan nanocomposites. *Applied Chemistry*, ۲۰۲۲.
20. Abbas Madhi, Behzad Shirkavand Hadavand. Bio-based Surface Modification of Wool Fibers by Chitosan-graphene Quantum Dots Nanocomposites. *Iranian Journal of Chemistry and Chemical Engineering*, ۲۰۲۱.
21. Abbas Madhi, Behzad Shirkavand Hadavand, UV protective bio-based epoxy/carbon quantum dots nanocomposite coatings: Synthesis and investigation of properties, *Journal of Composite Materials*, 2022.
22. Milad Abniki, Behzad Shirkavand Hadavand, Farhood Najafi, Iman Ghasedi, Synthesis of the effective flame retardant via modification of epoxy resin with phenylboronic acid, *Journal of Macromolecular Science, Part A*, 2022.
23. Abbas Madhi, Behzad Shirkavand Hadavand, Fluorescent epoxy-graphene quantum dots nanocomposites: synthesis and study of properties, *Polymer-Plastics Technology and Materials*, 2022.
24. Abbas Madhi, Behzad Shirkavand Hadavand, Fluorescent epoxy-graphene quantum dots nanocomposites: synthesis and study of properties, *Polymer-Plastics Technology and Materials*, 2021.
25. Ali Akbar Azemati, Seyed Saeid Rahimian Koloor, Hossain Khorasanizadeh, Michal Petr, Ghanbar Ali Sheikhzadeh, Mahdi Safi, Behzad Shirkavand Hadavand, Heat insulation effect in solar radiation of polyurethane powder coating nanocomposite, *Scientific Reports*, 2021.
26. Afsaneh Barekat, Behzad Shirkavand Hadavand, Ayeh Rayatzadeh, Rashid Badri, Silane Functionalized organic macrocyclic compounds modified UV curable polyurethane coatings: Synthesis and properties, *Journal of Applied Chemical Research*, 2021.
27. 14. Atasheh Soleimani, & Gorgani, Farhood Najafi, Fatemeh Mohammadrezaei, Behzad Shirkavand Hadavand, Transparent water-based UV-curable urethane acrylate ink-jet ink, *International Journal of Polymer Analysis and Characterization*, 2021.
28. 15. Davood Ghanbari, Behzad Shirkavand Hadavand, Malihe Pishvaei, Morphology and viscoelastic properties of UV cured-polyurethane acrylate/silicon carbide nanocomposites, *Iranian Polymer Journal*, 2021.
29. Afsaneh Barekat, Behzad Shirkavand Hadavand, Ayeh Rayatzadeh, Rashid Badri, Optimization in synthesis of organic macrocyclic compounds in presence of nano copper chromite catalyst, *Main Group Chemistry*, 2022.
30. Safoura Abarghouei, Aliakbar Hedayati, Mojtaba Raeisi, Behzad Shirkavand Hadavand, Hasan Rezaei, Amirreza Abed, & Elmdoust, Size-dependent effects of microplastic on uptake, immune system, related gene expression and histopathology of goldfish (*Carassius auratus*), *Chemosphere*, 2021.
31. Abbas Madhi, B Shirkavand Hadavand, Tri-functional Bio-friendly Cross-linker for UV-Curable Coatings: Synthesis and Study of Viscoelastic Properties, *Progress in Color, Colorants and Coatings*, 2021.
32. H Hosseini, B Shirkavand Hadavand, Synthesis and Viscoelastic Properties of Smart Hydrogel, *Polymer Science, Series B*, 2020.