Amin Abdollahi

Assistant Professor

IASBS, Department of Chemistry

Publications

Journals

- Alidaei-Sharif, Hossein and Roghani-Mamaqani, Hossein and Babazadeh-Mamaqani, Milad and Sahandi-Zangabad, Keyvan and Abdollahi, Amin and Salami-Kalajahi, Mehdi, "Photochromic polymer nanoparticles as highly efficient anticounterfeiting nanoinks for development of photo-switchable encoded tags", Journal of Photochemistry and Photobiology A: Chemistry, Vol. 436, 2023

- Abdollahi, Amin and Hanaei, Negar and Rahmanidoust, Mobin and Dashti, Ali, "Photoluminescent Janus oxazolidine nanoparticles for development of organic light-emitting diodes, anticounterfeiting, information encryption, and optical detection of scratch", Journal of Colloid and Interface Science, Vol. 630, 2023

- Hosseini, Zeinab Sadat and Abdollahi, Amin and Dashti, Ali and Matin, Maryam M and Afkhami-Poostchi, Amin, "Synthesis of tertiary amine functionalized Multi-Stimuli-Responsive latex nanoparticles by semicontinuous emulsion Polymerization: Investigation of responsivities and antimicrobial activity", Journal of Molecular Liquids, Vol. 352, NO. 37, 2022

- Babazadeh-Mamaqani, Milad and Roghani-Mamaqani, Hossein and Abdollahi, Amin and Salami-Kalajahi, Mehdi, "Development of optical chemosensors based on photochromic polymer nanocarriers", New Journal of Chemistry, Vol. 46, NO. 31, 2022

- Babazadeh-Mamaqani, Milad and Roghani-Mamaqani, Hossein and Abdollahi, Amin and Salami-Kalajahi, Mehdi, "Optical Chemosensors based on Spiropyran-Doped Polymer Nanoparticles for Sensing pH of Aqueous Media", Langmuir, Vol. 38, NO. 30, 2022

- Alidaei-Sharif, Hossein and Roghani-Mamaqani, Hossein and Babazadeh-Mamaqani, Milad and Sahandi-Zangabad, Keyvan and Abdollahi, Amin and Salami-Kalajahi, Mehdi, "Photochromic Polymer Nanoparticles as Highly Efficient Anticounterfeiting Nanoinks for Development of Photo-Switchable Encoded Tags", Available at SSRN 4178444, Vol. 38, NO. 30, 2022

- Tajbakhsh, Seyed Farzan and Abdollahi, Amin, "Chemistry and Technology of Advanced Polymers: A Review on Preparation Methods, Properties and Advanced Applications of Natural Spider Silk Fibers", Polymerization, Vol. 38, NO. 30, 2022

- Abdollahi, Amin and Dashti, Ali and Rahmanidoust, Mobin and Hanaei, Negar, "Metal-Free and Ecofriendly Photoluminescent Nanoparticles for Visualization of Latent Fingerprints, Anticounterfeiting, and Information Encryption", Sensors and Actuators B: Chemical, Vol. 38, NO. 30, 2022

- Gharieh, Ali and Abdollahi, Amin and Sohrabi, Laleh, "Acrylic-urethane/modified Rhodamine-B eco-friendly UV-curable anticounterfeiting ink", Polymers for Advanced Technologies, Vol. 630, 2022

- Nezhadghaffar-Borhani, Erfan and Abdollahi, Amin and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi, "Photoswitchable surface wettability of ultrahydrophobic nanofibrous coatings composed of spiropyran-acrylic copolymers", Journal of Colloid and Interface Science, Vol. 593, NO. 1, 2021

- Azimi, Reza and Abdollahi, Amin and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi, "Dual-mode security

anticounterfeiting and encoding by electrospinning of highly photoluminescent spiropyran nanofibers", Journal of Materials Chemistry C, Vol. 9, NO. 30, 2021

- Abdollahi, Amin and Dashti, Ali, "Photoluminescent Nanoinks with Multilevel Security for Quick Authentication of Encoded Optical Tags by Sunlight: Effective Physicochemical Parameters on Responsivity, Printability, and Brightness", ACS Applied Materials \& Interfaces, Vol. 13, NO. 37, 2021

- Ebrahimi, Hamidreza and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi and Shahi, Sina and Abdollahi, Amin, "Chemical incorporation of epoxy-modified graphene oxide into epoxy/novolac matrix for the improvement of thermal characteristics", Carbon Letters, Vol. 30, NO. 1, 2020

- Abdollahi, Amin and Herizchi, Ata and Roghani-Mamaqani, Hossein and Alidaei-Sharif, Hossein, "Interaction of photoswitchable nanoparticles with cellulosic materials for anticounterfeiting and authentication security documents", Carbohydrate polymers, Vol. 230, NO. 1, 2020

- Razavi, Bahareh and Abdollahi, Amin and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi, "Light-, temperature-, and pH-responsive micellar assemblies of spiropyran-initiated amphiphilic block copolymers: Kinetics of photochromism, responsiveness, and smart drug delivery", Materials Science and Engineering: C, Vol. 109, NO. 1, 2020

- Razavi, Bahareh and Abdollahi, Amin and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi, "Light-and temperature-responsive micellar carriers prepared by spiropyran-initiated atom transfer polymerization: Investigation of photochromism kinetics, responsivities, and controlled release of doxorubicin", Polymer, Vol. 187, NO. 1, 2020

- Abdollahi, Amin and Roghani-Mamaqani, Hossein and Herizchi, Ata and Alidaei-Sharif, Hossein and Enayati, Amirhossein and Sajedi-Amin, Sanaz, "Light-induced spherical to dumbbell-like

morphology transition of coumarin-functionalized latex nanoparticles by a [2π+ 2π] cycloaddition reaction: A fast and facile strategy to anisotropic geometry", Polymer Chemistry, Vol. 11, NO. 12, 2020

- Hajebi, Sakineh and Abdollahi, Amin and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi, "Temperature-responsive poly (N-isopropylacrylamide) nanogels: the role of hollow cavities and different shell cross-linking densities on doxorubicin loading and release", Langmuir, Vol. 36, NO. 10, 2020

- Abdollahi, Amin and Alidaei-Sharif, Hossein and Roghani-Mamaqani, Hossein and Herizchi, Ata, "Photoswitchable fluorescent polymer nanoparticles as high-security anticounterfeiting materials for authentication and optical patterning", Journal of Materials Chemistry C, Vol. 8, NO. 16, 2020

- Abdollahi, Amin and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi, "Morphology evolution of functionalized styrene and methyl methacrylate copolymer latex nanoparticles by one-step emulsifier-free emulsion polymerization", European Polymer Journal, Vol. 133, NO. 16, 2020

- Abdollahi, Amin and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi and Razavi, Bahareh and Sahandi-Zangabad, Keyvan, "Encryption and optical authentication of confidential cellulosic papers by ecofriendly multi-color photoluminescent inks", Carbohydrate polymers, Vol. 245, NO. 16, 2020

- Abdollahi, Amin and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi and Razavi, Bahareh, "Encryption and authentication of security patterns by ecofriendly multi-color photoluminescent inks containing oxazolidine-functionalized nanoparticles", Journal of Colloid and Interface Science, Vol. 580, NO. 16, 2020

- Abdollahi, Amin and Roghani-Mamaqani, Hossein and Razavi, Bahareh and Salami-Kalajahi, Mehdi, "Photoluminescent and chromic nanomaterials for anticounterfeiting technologies: recent advances and future challenges", ACS nano, Vol. 14, NO. 11, 2020

- Hosseini, Zeinab Sadat and Dashti, Ali and Abdollahi, A, "Synthesis and Investigation of Stimuli-Responsive Amphiphilic Latex Nanoparticles by Seeded Emulsion Polymerization", Iranian Journal of Chemical Engineering (IJChE), Vol. 17, NO. 1, 2020

- Hajebi, Sakineh and Abdollahi, Amin and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi, "Hybrid and hollow Poly (N, N-dimethylaminoethyl methacrylate) nanogels as stimuli-responsive carriers for controlled release of doxorubicin", Polymer, Vol. 180, NO. 1, 2019

- Abdollahi, Amin and Roghani-Mamaqani, Hossein and Razavi, Bahareh, "Stimuli-chromism of photoswitches in smart polymers: Recent advances and applications as chemosensors", Progress in Polymer Science, Vol. 98, NO. 1, 2019

- Abdollahi, Amin and Roghani-Mamaqani, Hossein and Razavi, Bahareh and Salami-Kalajahi, Mehdi, "The light-controlling of temperature-responsivity in stimuli-responsive polymers", Polymer Chemistry, Vol. 10, NO. 42, 2019

- Gholipour-Mahmoudalilou, Meysam and Roghani-Mamaqani, Hossein and Azimi, Reza and Abdollahi, Amin, "Preparation of hyperbranched poly (amidoamine)-grafted graphene nanolayers as a composite and curing agent for epoxy resin", Applied Surface Science, Vol. 428, NO. 1, 2018

- Mousavi, Alireza and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi and Shahi, Sina and Abdollahi, Amin, "Modification of graphene with silica nanoparticles for use in hybrid network formation from epoxy, novolac, and epoxidized novolac resins by sol-gel method: Investigation of thermal

properties", eXPRESS Polymer Letters, Vol. 12, NO. 3, 2018

- Abdollahi, Amin and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi and Mousavi, Alireza and Razavi, Bahareh and Shahi, Sina, "Preparation of organic-inorganic hybrid nanocomposites from chemically modified epoxy and novolac resins and silica-attached carbon nanotubes by sol-gel process: Investigation of thermal degradation and stability", Progress in Organic Coatings, Vol. 117, NO. 3, 2018

- Ebrahimi, Hamidreza and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi and Shahi, Sina and Abdollahi, Amin, "Preparation of Furfuryl Alcohol-Functionalized Carbon Nanotube and Epoxidized Novolac Resin Composites with High Char Yield", Polymer Composites, Vol. 117, NO. 3, 2018

- Mousavi, Alireza and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi and Shahi, Sina and Abdollahi, Amin, "Grafting of silica nanoparticles at the surface of graphene for application in novolac-type phenolic resin hybrid composites", Materials Chemistry and Physics, Vol. 216, NO. 3, 2018

- Abdollahi, Amin and Mouraki, Alireza and Sharifian, Mohammad Hossain and Mahdavian, Ali Reza, "Photochromic Properties of Stimuli-Responsive Cellulosic Papers Modified by Spiropyran-Acrylic Copolymer in Reusable pH-Sensors", Carbohydrate Polymers, Vol. 200, NO. 3, 2018

- Abdollahi, Amin and Sahandi-Zangabad, Keyvan and Roghani-Mamaqani, Hossein, "Light-Induced Aggregation and Disaggregation of Stimuli-Responsive Latex Particles Depending on Spiropyran Concentration: Kinetics of Photochromism and Investigation of Reversible Photopatterning", Langmuir, Vol. 34, NO. 46, 2018

- Abdollahi, Amin and Sahandi-Zangabad, Keyvan and Roghani-Mamaqani, Hossein, "Rewritable Anticounterfeiting Polymer Inks Based on Functionalized Stimuli-Responsive Latex Particles Containing Spiropyran Photoswitches: Reversible

Photopatterning and Security Marking", ACS applied materials \& interfaces, Vol. 10, NO. 45, 2018

- Abdollahi, Amin and Alinejad, Zeinab and Mahdavian, Ali Reza, "Facile and Fast Photosensing of Polarity by Stimuli-Responsive Materials Based on Spiropyran for Reusable Sensors: A Physico-Chemical Study on the Interactions", Journal of Materials Chemistry C, Vol. 5, NO. 26, 2017

- Abdollahi, Amin and Roghani-Mamaqani, Hossein and Salami-Kalajahi, Mehdi and Razavi, Bahareh and Mousavi, Alireza and Shahi, Sina, "Preparation of hybrid composites based on epoxy, novolac, and epoxidized novolac resins and silica nanoparticles with high char residue by sol-gel method", Polymer Composites, Vol. 117, NO. 3, 2017

- Keyvan Rad, Jaber and Mahdavian, Ali Reza and Salehi-Mobarakeh, Hamid and Abdollahi, Amin, "FRET phenomenon in photoreversible dual-color fluorescent polymeric nanoparticles based on azocarbazole/spiropyran derivatives", Macromolecules, Vol. 49, NO. 1, 2016

- Torabi, Saeid and Mahdavian, Ali Reza and Sanei, Mahmood and Abdollahi, Amin, "Chitosan and functionalized acrylic nanoparticles as the precursor of new generation of bio-based antibacterial films", Materials Science and Engineering: C, Vol. 59, NO. 1, 2016

- Abdollahi, Amin and Rad, Jaber Keyvan and Mahdavian, Ali Reza, "Stimuli-responsive cellulose modified by epoxy-functionalized polymer nanoparticles with photochromic and solvatochromic properties", Carbohydrate polymers, Vol. 150, NO. 1, 2016

- Keyvanrad, Jaber and Abdollahi, Amin and Mahdavian, Ali Reza., "Smart Polymers: VI. Application of Photochromic Polymers in Stimuli-Responsive Systems", Polymerization, Vol. 6, NO. 2, 2016

- Abdollahi, Amin and Soltan-Dehghan, Morteza and Razavi, Bahareh, "Formulation, Properties and Applications of the Sticky Foams", Polymerization, Vol. 6, NO. 1, 2016

- Abdollahi, Amin and Mahdavian, Ali Reza and Salehi-Mobarakeh, Hamid, "Preparation of stimuli-responsive functionalized latex nanoparticles: the effect of spiropyran concentration on size and photochromic properties", Langmuir, Vol. 31, NO. 39, 2015

- Abdollahi, Amin and Keyvanrad, Jaber and Mahdavian, Ali Reza., "Smart Polymers: IV. Photochromic Polymers and Photochromism Phenomenon", Polymerization, Vol. 5, NO. 3, 2015

Conferences

- Abdollahi, Amin and Mahdavian, Ali Reza and Salehi-Mobarakeh, Hamid, "Preparation of the stimuli-responsive photochromic paper by reactive mixing of cellulosic paper with spiropyran-based functional latex", International Seminar on Polymer Science and Technology, 2014

- Abdollahi, Amin and Mahdavian, Ali Reza and Salehi-Mobarakeh, Hamid, "The effect of polarity of the media on color changes in photochromic nanoparticles containing spiropyran under UV irradiation", IRANIAN SEMINAR OF ORGANIC CHEMISTRY, 2014

- Abdollahi, Amin and Salehi-Mobarakeh, Hamid and Mahdavian, Ali Reza, "Preparation of photochromic functionalized polymeric nanoparticles based on spiropyran and acrylic copolymer by emulsion polymerization", IRANIAN SEMINAR OF ORGANIC CHEMISTRY, 2014

- Torabi, S and Sanei, M and Abdollahi, A and Mahdavian, AR, "Reactive mixing of chitosan and functionalized acrylic nanoparticles for preparation of a new generation of

antibacterial films", International Seminar on Polymer Science and Technology, 2014

- Abdollahi, Amin and Salehi-Mobarakeh, Hamid and Mahdavian, Ali Reza, "Synthesis of a spiropyran-based acrylic monomer and preparation of its latex nanoparticles with photochromic properties", International Seminar on Polymer Science and Technology, 2014