

PERSONAL INFORMATION

Name	Fatemeh Seifikar
Gender	Female
Email	fatemeh.seifikar@yahoo.com
Nationality	Iranian
University	Faculty of Chemistry, Department of Physical Chemistry, Bu-Ali Sina University, Shahid Mostafa Ahmadi Roshan Street, Hamedan, Iran. Postal code: 6517838695 Tel: +988138381601-10

EDUCATION

PhD Student in Physical Chemistry (2019-Now)	Bu-Ali Sina University, Faculty of Chemistry
Thesis title	Synthesis of polyethylene glycol nanofluids having carbon quantum dots and metallic nanoparticles with surface plasmonic resonance for photo-thermal conversion
Supervisor	Professor Saeid Azizian
Project abstract	In this study, we synthesize new nanofluids and after full characterization of them, we investigate their photo-thermal conversion properties. Finally, the prepared nanofluids will be used for sunlight to heat conversion applications.
Master of Science in Physical Chemistry (2015-2018)	Bu-Ali Sina University, Faculty of Chemistry
Thesis title	Synthesis of micro- and nano-size carbon particles for adsorption of dyes from aqueous solution.
Supervisor	Professor Saeid Azizian
Project abstract	In this study, commercial poly ethylene glycol 200 and D(+)-Glucose-monohydrate were used to prepare micro- and nano-size carbon particles by microwave method for removal of dyes from aqueous solution. The prepared carbon particles were characterized by FE-SEM, TEM, XRD, N ₂ adsorption/desorption isotherm, EDS, TGA/DTA, FT-IR, and ATR-IR analysis. Then, adsorption of cationic blue and methyl violet dyes onto the prepared carbon particles was studied from equilibrium and kinetic point of view. The results showed that the rate of adsorption of cationic blue and methyl violet onto the prepared carbon particles was very fast and most of the dye is adsorbed at first seconds of process. The experimental kinetic data for each of dyes was tested by the pseudo-first order, pseudo-second order, Elovich, mixed 1, 2-order, fractal-like pseudo-first order, and fractal-like pseudo-second order models and also, the experimental equilibrium data was fitted with Langmuir, Freundlich, Redlich-Peterson, Toth, extended

	Langmuir, and Langmuir–Freundlich models. The effect of temperature and pH on the adsorption of cationic blue and methyl violet by the prepared carbon particles were tested too.
Bachelor of Science in Chemistry (2011-2015)	Bu-Ali Sina University, Faculty of Chemistry

SKILLS

Computer softwares	Adobe photoshop, Chem office, Microsoft office, 3D Builder, Origin Pro, EndNote
Languages	Persian (mother tongue), English (IELTS 6)
Painting	Pastel, Chiaroscuro
Technical skills	❖ UV-Vis spectrophotometer ❖ Dynamic Light Scattering (Zetasizer)
Technical education courses	❖ Sample preparation methods ❖ Atomic Absorption Spectrometry ❖ Gas Chromatography ❖ Scanning Electron Microscopy ❖ IR

PUBLICATIONS

Number	Status	
1	Published	F. Seifikar, S. Azizian, <i>A facile method for precipitating of dispersed carbon particles prepared by microwave heating and its application for dye removal</i> , Journal of Molecular Liquids , 275 (2019) 394–401.
2	Published	F. Seifikar, S. Azizian, M. Sillanpaa, <i>Microwave-assisted synthesis of carbon powder for rapid dye removal</i> , Materials Chemistry and Physics 250 (2020) 123057.
3	Published	F. Seifikar, S. Azizian, <i>Super-stable carbon quantum dots nanofluid for efficient solar thermal conversion</i> , Energy Conversion and Management , 228 (2021) 113675.
4	Published	F. Seifikar, S. Azizian, M. Eslamipanah, B. Jaleh, <i>Efficient photo thermal conversion using Pt nanofluid prepared by laser ablation in liquid</i> , Solar Energy Materials & Solar Cells , 238 (2022) 111581.
5	Published	A. Shahsavar, M. A. Mirzaei, A. Shaham, M. Jamei, M. Karbasi, F. Seifikar, S. Azizian, <i>Experimental exploration of rheological behavior of polyethylene glycol carbon dot nanofluid: Introducing a robust artificial intelligence paradigm optimized with unscented Kalman filter technique</i> , Journal of Molecular Liquids , 358 (2022) 119198.
6	Published	A. Shahsavar, A. Shaham, M. A. Mirzaei, M. Jamei, F. Seifikar, S. Azizian, <i>Assessment of thermal conductivity of polyethylene glycol carbon dot nanofluid through a combined experimental-data mining investigation</i> , Journal of Materials Research and Technology , 19 (2022) 2695–2704.
7	Published	F. Seifikar, S. Azizian, M. Eslamipanah, B. Jaleh, <i>One step synthesis of stable nanofluids of Cu, Ag, Au, Ni, Pd, and Pt using laser ablation in liquids method and study of their capability in solar thermal conversion</i> , Solar Energy 246 (2022) 74–88.
8	Submitted (Under review)	F. Seifikar, S. Azizian, A. Nasri, B. Jaleh, <i>Photo-thermal conversion properties of Cr, Mo, and W nanofluids in PEG prepared by LAL method</i>

		<i>for direct absorption solar collectors applications, Journal of Thermal Analysis and Calorimetry, (2022).</i>
9	Submitted	F. Seifikar, S. Azizian , A. Nasri, B. Jaleh, <i>Comparative study on photo-thermal conversion properties of vanadium nanofluids prepared by laser ablation in H₂O and polyethylene glycol, Journal of Industrial and Engineering Chemistry, (2023).</i>
10	Submitted	F. Seifikar, S. Azizian , B. Jaleh, <i>Photo-thermal conversion ability of PEG and H₂O based microfluids of sodium lignosulfonate and its carbonized form, New Journal of Chemistry, (2023).</i>

CONFERENCES

Fatemeh Seifikar, Saeid Azizian, *A facile method for precipitation of dispersed carbon particles in PEG for dye removal applications, 3rd Applied Chemistry Seminar, Bu-Ali Sina University, Hamedan- Iran, 28-29 August 2018, Article number: 3ACSP34T4.*

Fatemeh Seifikar, Saeid Azizian, *Application of sodium lignosulfonate nanofluid for photo-thermal conversion, 6rd Applied Chemistry Seminar, Malayer University, Malayer- Iran, 28-29 August 2022, Article number: 1097.*