Curriculum Vitae
May 2022

Personal data

Name: **Javad Sayyad Amin**

Nationality: **Iranian**

Date of birth: **1975**

Gender: **Male**

Marital status: **Married**

Address: **Chemical Engineering Department, Faculty of Engineering, University of Guilan, Rasht, Iran, P.O. Box: 3756**.

Tel: **+(98) 1333690274 (3203)**
Faxes: **(+98) 1333690271**

Email: **sayyadamin@guilan.ac.ir, sayyadamin@gmail.com**
URL: https://guilan.ac.ir/~sayyadamin

ORCID 0000-0002-4412-4035

Education

2005-2010	*PhD in Chemical Engineering, Shiraz University, Shiraz, Iran.* *PhD Thesis: "Wettability Alteration Due to Asphaltene Precipitation".*
2000-2003	*M.Sc. in Chemical Engineering, , Shiraz University, Shiraz, Iran* *M.Sc. Thesis: "Determination of Effective Diffusivity and Mathematical Modeling of Heap Leaching process in Sarcheshmeh Copper Complex".*
1995-1999	*B.Sc. in Chemical Engineering, Shiraz University, Shiraz, Iran.*

Academic Experience

2007-2008	*Leturer in computer programming, Shiraz university, Shiraz, Iran*
2004-2007	*Lecturer in Mass & Heat Transfer, Gas and Oil refinery, Chemical Reaction Engineering, Engineering Mathematics, Islamic Azad University, Lamerd Branch, Iran*
2002-2003	*Lecturer in Chemical Reaction Engineering, Control in Chemical Process, Engineering Mathematics, Islamic Azad University, Gachsaran Branch. Iran*

Research Interests and Activities

Petroleum Production Methods
Asphaltene & Wax Precipitation.
Energy and Environment,
Process Engineering,
Transport Phenomena

Projects

-   Innovation of Composite Sorbent to Remove Oil Spill in Caspian Sea: Prepared from Different Regions of Guilan Province , port of marine administration gilan province, 2014-15

-   Prediction of CaspianSea Oil Spill Absorption by Artificial Intelligence, port of marine administration Guilan province, 2014-15

Presentations (English)

1. *B. Abbasi suraki, J. Sayyad Amin,* M. Omidi*, "Using Neural Network to Calculate the Growth Rate of Crystals Gas Hydrates of Simple Gases", 14th National Chemical Engineering Congress and Exhibition, Tehran, Iran (2012)*
2. *J. Sayyad Amin, S. Allimohamaddi, "Different surface precipitation scenarios in Iranian crude oils", 7th International Chemical Engineering Congress and Exhibition, Kish, Iran (2011)*
3. *J. Sayyad Amin, S. Allimohamaddi, "Investigation of structural characteristics of different asphaltene deposits after surface wetting at high pressure", 7th International Chemical Engineering Congress and Exhibition, Kish, Iran (2011)*
4. *J. Sayyad Amin, S. Ashraf, and M. Yousefi, "Comparison different neural machine learning models for predicting of nano-size pharmaceuticals", 7th International Chemical Engineering Congress and Exhibition, Kish, Iran (2011)*
5. *J. Sayyad Amin, S. Alimohamadi, "An artificial neural network-based method to predict adsorption of heavy metal ions from aqueous solutions", 7th International Chemical Engineering Congress and Exhibition, Kish, Iran (2011)*

6. *J. Sayyad Amin, S. Alimohamadi, "Prediction of methane hydrate formation pressure: learning data under conditions of different temperature and salinity", 7th International Chemical Engineering Congress and Exhibition, Kish, Iran (2011)*

7. *J. Sayyad Amin, B. AbbasiSouraki, H. Tondro and M. Ghavami, "ANN model for effective diffusion coefficient of water loss in osmotic dehydration of geen bean", 7th International Chemical Engineering Congress and Exhibition, Kish, Iran (2011)*

8. *J. Sayyad Amin, B. AbbasiSouraki, M. Ghavami and H. Tondro, "Prediction of equilibrium water loss during osmotic dehydration in green bean using artificial neural network", 7th International Chemical Engineering Congress and Exhibition, Kish, Iran (2011)*

9. *J. Sayyad Amin, S. Alimohamadi, "Comparison between thermodynamic and neural network model in methane hydrate formation process",The 3rd Technical Conference Of Thermodynamics, Rasht, Iran (2011)*

10. *J. Sayyad Amin, S. Alimohamadi, " An intelligent scenario for methane hydrate formation at different thermodynamic conditions", The 3rd Technical Conference Of Thermodynamics, Rasht, iran,(2011)*

11. *J. Sayyad Amin, B. Abbasi, M.Omidi, "Theoretical and experimental study of the dry peas in a fluidized bed dryer by artificial intelligence network", 11th Annual scientific- research conference- Guilan university, Rasht, Iran (2011)*

12. *J. Sayyad Amin, "Role of asphaltene structure on mechanism of precipitation on homogeneous surface", 11th Annual scientific- research conference- Guilan university, Rasht, Iran (2011)*

13. *J. Sayyad Amin , Sh. Ayatollahi, "Using an Artificial Inteligence (Bayesian Belief Network) to Predict asphaltene precipitation at different conditions".1st International Regional Chemical and Petroleum Engineering, Kermanshah, Iran, (2010)*

14. *J. Sayyad Amin, E. Nikooee, and Sh. Ayatollahi, "Multifractal Characteristics and Wettability Implication: An Inovative Method to Investigate Wettability Alteration of Asphaltene Deposited Surface". 1st International Regional Chemical and Petroleum Engineering, Kermanshah, Iran, (2010)*

15. *J. Sayyad Amin, Sh. Ayatollahi, A. Alamdari, M, Escrochi, H. Jahromi, and E. Nikooee, " Bi- fractal dimension description- Inferring topography alteration of an asphaltene deposited heterogeneous surface". The 6th International Chemical Engineering Congress & Exhibition (IChEC 2009), Kish Island, Iran, (2009)*

16. *E.Nikooee,J. Sayyad Amin, Sh. Ayatollahi, A. Alamdari, H. Jahromi, M. Escrochi, "Fractal Analysis of Surface Roughness Induced by Asphaltene Deposits: Effect of Surface Topography on Wettability Alteration",1st International Petroleum Conference & Exhibition Session (EAGE Conference), Iranm, (2009)*

17. *J. Sayyad Amin , M. Escrochi , N.Mehranbod, M.H. Namazirad, Sh.Ayatollahi, and A. Alamdari, "A. Modeling Thermally Induced Wettability Alteration Using Bayesian Belief Networks", 10th Intl. Wetability Conference Oct 2008, Abu Dhabi, UAE, (2008)*

18. *A. Abbasloo, J. Sayyad Amin, M. Rahimpour, "A comparison of multi- stages spherical and conventional tubular methanol synthesis reactors in presence of catalyst deactivation", 12th National Iranian Chemical Engineering Congress, Tabriz, Iran, (2008)*

19. *J. Sayyad Amin, R. Eslamloueian, "Binary Diffusion Coefficients of Low-Density Gases by neural network", 12th National Iranian Chemical Engineering Congress,Tabriz,Iran (2008)*

20. *J. Sayyad Amin, M.R. Rahimpour, A.H. Jahanmiri,. "Application of He"shomotopy perturbation method to boundary layer flow, convection heat and mass transfer over a flat plate" 12th National Iranian Chemical Engineering Congress,Tabriz,Iran (2008)*

21. *D.Mowla, J. Sayyad Amin, R. Naseh,."Simulation of heap leaching process in sarcheshmeh copper complex", 16th INTERNATIONAL CONGRESS OF CHEMICAL AND PROCESS ENGINEERING,22-26 August, Prague - Czech Republic(2004)*

22 *D.Mowla, J. Sayyad Amin, R. Naseh, "Simulation of Heap Leaching Process in Sarcheshmeh Copper Complex", 8th National Iranian Chemical Engineering Congress, Mashad, Iran (2003)*

Presentations (Persian)

<div dir="rtl">

1. جواد صیاد امین، سمیه نیکخواه، مطالعه آزمایشگاهی تعیین فوق اشباعیت و ناحیه نیمه پایدار تاربال های نفتی دریای خزر، همایش ملی بهداشت محیط، سلامت و محیط زیست پایدار، دانشگاه همدان 1392

2. جواد صیاد امین ، مجید وارد آبکنار، امیر اکبر زاده، بررسی آزمایشگاهی حذف آلاینده های نفتی از آب دریا توسط ترکیبی از جاذب های طبیعی و مصنوعی، همایش ملی بهداشت محیط، سلامت و محیط زیست پایدار، دانشگاه همدان 1392

3. جواد صیاد امین ، بهروز عباسی سورکی و رشید ارشادی فارسانی ،۱۳۹۲، تخمین دمای تجزیه هیدرات در حضور بازدارنده ها با استفاده از الگوی شبکه عصبی و مقایسه آن با مدل های Yusif و Kasper ، دومین همایش ملی هیدرات های گازی ایران، سمنان، دانشکده مهندسی شیمی نفت و گاز

4. جواد صیاد امین و زینب اصغرپور، ۲۹۳۱، مدل سازی حذف دی اکسیدکربن از جریان گاز سنتز توسط تشکیل هیدرات   و مقایسه   آن با نتایج تجربی، دومین همایش ملی هیدرات های گازی ایران، سمنان، دانشکده مهندسی شیمی نفت و گاز

5. جواد صیاد امین، الهیار داغبندان، مرتضی محمدی ، کاربرد روش هموتوپی پرتوربیشندر حل معادلات غیر خطی انتقال (HPM) در انتقال جرم، دومین همایش ملی هیدرات گازی ایران، ۵۲-۶۲ اردیبهشت ۲۹۳۱- سمنان- دانشگاه سمنان

6. جواد صیاد امین، سمیه نیکخواه پیش بینی شرایط تشکیل هیدرات های گازی با استفاده از روش سطح پاسخ ,دومین همایش ملی هیدرات گازی ایران، ۵۲-۶۲ اردیبهشت ۲۹۳۱- سمنان- دانشگاه سمنان

7. جواد صیاد امین، سمیه نیکخواه ،"بهینه سازی رسوبات آسفالتین در نفت خام با استفاده از روش سطح پاسخ"، چهاردهمین کنگره ملی مهندسی شیمی، تهران، ایران1391 ،

8. جواد صیاد امین، سپیده علیمحمدی ،"به کارگیری ماشین بردار پشتیبان در پیش بینی تعادل فازی هیدرات متان درحضور بازدارندههای ترمودینامیکی"، چهاردهمین کنگره ملی مهندسی شیمی، تهران، ایران1391 ،

9. جواد صیاد امین، کریستوفر سرکیزی شمس حاجیان، "پیش بینی ویسکوزیته مخلوط های آبی-آلی 45 ماده توسط شبکه عصبی"، چهاردهمین کنگره ملی مهندسی شیمی، تهران، ایران 1391 ،

10. جواد صیاد امین، مجید طاهری، سپیده علیمحمدی،"سناریوهای هوشمند برای فرآیند جذب سولفید هیدروژن در برج شیرین سازی گاز پارس جنوبی"، چهاردهمین کنگره ملی مهندسی شیمی، تهران، ایران1391 ،

11. جواد صیاد امین، مرتضی محمدی قایچی،"استفاده از شبکه عصبی برای محاسبه سرعت رشد کریستال های هیدرات گازی گازهای ساده"، چهاردهمین کنگره ملی مهندسی شیمی، تهران، ایران1391 ،

</div>

Publications (English)

1. M. Kialashaki, **J. Sayyad Amin**, and S. Zendehboudi "Molecular Dynamics Simulation to Evaluate the Stability of Tetra-n-butyl Ammonium/Phosphonium Bromide Semiclathrate Hydrates in the Presence and Absence of Methane, Carbon Dioxide,and Ethanol Molecules ", Ind. Eng. Chem. Res. 2023, 62, 18, 7175–7196

2. A. Eftekhari, **J. Sayyad Amin**, S. Zendehboudi, "A molecular dynamics approach to investigate effect of pressure on asphaltene self-aggregation", JOURNAL OF MOLECULAR LIQUIDS, 2023, (376), pp. 121347-121370

3. R. Hasanzadeh , J**. Sayyad Amin**, B. Abbasi Souraki, O. Mohammadzadeh, and S. Zendehboudi,"Reliable Tools to Forecast Sludge Settling Behavior: Empirical Modeling", Energies, 2023, (963), pp. 1-23

4. M. Kia Lashaki, **J. Sayyad Amin**, S. Zendehboudi "Numerical simulation of homogeneous fluidization behaviour of Geldart Group A particles in gas tapered fluidized beds", CANADIAN JOURNAL OF CHEMICAL ENGINEERING, 2022, (100), pp. 2632-2647

5. Y, Mehdizadeh Chellehbari, **J. Sayyad Amin**, and S. Zendehboudi, "How Does a Microfluidic Platform Tune the Morphological Properties of Polybenzimidazole Nanoparticles?", JOURNAL OF PHYSICAL CHEMISTRY B, 2021, (128), pp. 308-326

6. S. Tazikeh , **J. Sayyad Amin**, S. Zendehboudi , A. Shafiei , "Effects of asphaltene structure and polythiophene-coated magnetite nanoparticles on surface topography and wettability alteration of silica surface", Journal of Molecular Liquids, 2022, (349), pp. 1-14

7. M. Kialashaki, **J. Sayyad Amin**, O. Mohammadzadeh, S. Zendehboudi "Modeling Approach to Determine Static Rivulet Height in Regular Polygonal Capillary Tubes", ACS Omega, 2022, (70), pp. 9310-9321

8. S. Tazikeh, **J. Sayyad Amin**, S. Zendehboudi, A. Shafiei, "Effects of asphaltene structure and polythiophene-coated magnetite nanoparticles on surface topography and wettability alteration of silica surface", Journal of Molecular Liquids , 2022, (349), pp. 1-14

9. Y. Mehdizadeh Chellehbari, **J. Sayyad Amin**, S. Zendehboudi, "How Does a Microfluidic Platform Tune the Morphological Properties of Polybenzimidazole Nanoparticles?", The Journal of Physical Chemistry B, 2022, (126), 308-326

10. Y. Mehdizadeh Chellehbari, K. Adavi, **J. Sayyad Amin**, S. Zendehboudi, "A numerical simulation to effectively assess impacts of flow channels characteristics on solid oxide fuel cell performance", Energy Conversion and Management, 2021, (244), pp. 1-17

11. S. Tazike, J. Kondori, S. Zendehboudi, **J. Sayyad Amin**, F. Khan,"Molecular dynamics simulation to investigate the effect of polythiophene-coated Fe3O4 nanoparticles on asphaltene precipitation", Chemical Engineering Science, 2021, (237), pp.1-18

12. S. Alimohammadi, **J. Sayyad Amin**, S. Nikkhah, M. Soroush, S. Zendehboudi, "Development of a new scaling model for asphaltene precipitation in light, medium, and heavy crude oils", Journal of Molecular Liquids, 2020, (312), pp. 1-12

13. S. Tazikeh, **J. Sayyad Amin**, S. Zendehboudi, M. Dejam, I. Chatzis, "Bi-fractal and bi-Gaussian theories to evaluate impact of polythiophene-coated Fe3O4 nanoparticles on asphaltene precipitation and surface topography", Fuel, 2020, (272), pp. 1-13

14. S. Tazikeh, **J. Sayyad Amin**, S. Zendehboudi, "Experimental study of asphaltene precipitation and metastable zone in the presence of polythiophene-coated Fe3O4 nanoparticles", 2020, (301), pp. 1-10

15. **J. Sayyad Amin**, H. Rajabi Kuyakhi, A. Bahadori, "Intelligent prediction of aliphatic and aromatic hydrocarbons in Caspian Sea sediment using a neural network based on particle swarm optimization ", Petroleum Science and Technology, 2019, (37), pp. 2364- 2373

16. **J. Sayyad Amin**, S. Zendehboudi, A. Eftekhari, "Population balance model determines size distribution of Caspian Sea tarball aggregates in the presence of poloxamine copolymer ", Fuel, 2019, (254), pp.1-9

17. **J. Sayyad Amin**, H. Rajabi Kuyakhi, A. Bahadori "Prediction of formation of polycyclic aromatic hydrocarbon (PAHs) on sediment of Caspian Sea using artificial neural networks",PETROLEUM SCIENCE AND TECHNOLOGY, 2019,(37), pp.1987-2000

18. **J. Sayyad Amin**, S. Nikkhah, S. Zendehboudi, O. Mohammadzadeh, I. Chatzisd "A Novel Strategy to Determine Titration-Based Asphaltene Precipitation in Various Viscosity Oil Systems: Laboratory and Modelling Investigations ", CHEMICAL ENGINEERING RESEARCH & DESIGN, 2019, (143),

19. **J. Sayyad Amin**, S. Zendehboudi, A. Eftekhari, "New reliable tools to mathematically model chemical reaction systems", CHEMICAL ENGINEERING RESEARCH & DESIGN,2019, (141), pp. 156-169

20. **J. Sayyad Amin**, M. Kia Lashakia, S. Zendehboudi," Influence of poloxamine copolymeric surfactant on wetting behavior of tarballs in southwestern Caspian coast ", JOURNAL OF MOLECULAR LIQUIDS, 2019, (281), pp.216-224

21. **J. Sayyad Amin**, H. Rajabi Kuyakhi, T. Kashiwao, A. Bahadori "Development of ANFIS models for polycyclic aromatic hydrocarbons (PAHs) formation in sea sediment", Petroleum Science and Technology, 2019, (37), pp. 679-686.

22. **Javad Sayyad Amin**, Saeed Rafiie, Alireza Bahadori, "Neural Network to Separate Carbon Dioxide from different Gas Mixtures Using Semi-Clathrate Hydrates in the Presence of Promoterss ",Nashrieh Shimi va Mohandesi Shimi Iran (NSMSI), 2019, (38), pp. 231-241.

23. **J. Sayyad Amin**, S. Zendehboudi, E. Mohamadi,"Evolution of tar ball aggregates in Caspian Sea: Implications of connectionist tools linked with image analysis", Environmental Progress & Sustainable Energy, 2018, (37), pp. 2016-2025

24. R. Hasanzadeh, B. Abbasi Souraki**, J. Sayyad amin**, "Investigation of the Kinetics of Starch Extraction from Potato with Analytical and empirical Models, using Genetic Algorithm",Journal of Food Science & Technology, 2018, (15), pp. 153-165

25. **J. Sayyad Amin**, S. Tazikeh, S Zendehboudi, I. Chatzis, "New Modeling Strategies Evaluate Bubble Growth in Systems of Finite Extent: Energy and Environment Implications", Industrial & Engineering Chemistry Research, 2018, (57), pp. 5680-5689

26. **J. Sayyad Amin**, S. Nikkhaha, S. Zendehboudi," A new experimental and modeling strategy to determine asphaltene precipitation in crude oil", CHEMICAL ENGINEERING RESEARCH & DESIGN,2017, (128), pp. 162-173

27. **J. Sayyad Amin**, A. Bahadori, B. Hosseininia, S. Rafiee, N. Kheilnezhad "Prediction of hydrate equilibrium conditions using k-nearest neighbor algorithm to CO2 capture", Petroleum Science and Technology, 2017, (35), pp. 1070-1077

28. **J. Sayyad Amin**, S. Alimohammadi, S. Zendehboudi "Systematic investigation of asphaltene precipitation by experimental and reliable deterministic tools ", CANADIAN JOURNAL OF CHEMICAL ENGINEERING, 2017(95), pp. 1388–1398

29. **J. Sayyad Amin**, M. Vared Abkenar, S. Zendehboudi "Natural Sorbent for Oil Spill Cleanup from Water Surface: Environmental Implication" , Ind. Eng. Chem. Res., 2015, vol.54 (43), pp 10615–10621

30. **J. Sayyad Amin,** M. Bahadori, M. Lee, T. Kashiwao, A. Bahadori, S. Rafiee, B. Hosseini Nia, "Prediction of carbon dioxide separation from gas mixtures in petroleum industries using the Levenberg–Marquardt algorithm" , Petroleum Science and Technology, 2016,vol. 34, no. 8, pp. 703-711.

31. **J. Sayyad Amin**, S. Keshavarz Babaee Nejad, M. Veiskarami, A. Bahadori," Prediction of hydrate formation temperature based on an improved empirical correlation by imperialist competitive algorithm" Petroleum Science and Technology, 2016, vol. 34, no. 2, pp. 162-169.

32. **J. Sayyad Amin**, B. Abbasi Souraki, A. Bahadori, S. Rafiee, "Prediction of hydrate formation conditions to separate carbon dioxide from fuel gas mixture in the presence of various promoter ",Petroleum Science and Technology, 2016,vol. 34. no. 2, pp. 153-161.

33. **J. Sayyad Amin**, M. Bahadori, A. Bahadori, B. Abbasi Souraki, S. Rafiee, "Modelling of CO2 capture and separation from different gas mixtures using semiclathrate hydrates ",Petroleum Science and Technology,2016, vol. 34, no. 5, pp. 406-414.

34. **J. Sayyad Amin**, A. Bahadori, T. Kashiwao, Z. Ahmad, B. Abbasi Souraki, S. Rafiee "A new empirical correlation for prediction of carbon dioxide separation from different gas mixtures ", Petroleum Science and Technology, 2016, 34(6), pp.562-569

35. **J. Sayyad Amin**, A. Bahadori, E. Mohamadi & B. Hoseini Nia "Predicting Natural gas hydrate formation temperature using Levenberg Marquardt algorithm and Vandermonde matrix", Petroleum Science and Technology, 2015, 33(9), pp. 1038-1044

36. **J Sayyad Amin**, S. Nikkhah, S. Zendehboudi, and L. James, Effective Experimental and Theoretical Methods to Determine Supersaturation of Tar Balls Deposited Along the Caspian Sea, Energy Fuels, 2015, 29 (5), pp 2931–2939

37. **J. SayyadAmin**,,S. Nikkha, .M.Veiskarami, "A statistical method for assessment of the existing correlations of hydrate forming conditions "Journal of Energy Chemistry, 2015, <u>vol</u> 2(1),pp. 93-100

38. H. Ghanadzadeh Gilani, **J. Sayyad Amin**, M. Golpour, and H. Heshmati, "AN ARTIFICIAL NEURAL NETWORK-BASED METHOD TO PREDICT LLE DATA

OF 2-BUTANOL IN A TERNARY SYSTEM", Polymers Research Journal, 2013, vol 6(1), (pp. 7-11)

39. M.H. Ghatee, B. Hemmateenejad, T. Sedghamiz, T. Khosousi, Sh. Ayatollahi,O.Seiedi, **J. Sayyad Amin,"** Multivariate Curve Resolution Alternating Least-Squares As a Tool for Analyzing Crude Oil Extracted Asphaltene Samples", Energy Fuels, Vol. 26, Issue 9, pp 5663–5671, 2012.

40. J. **Sayyad Amin**, E.Nikooee, M.H. Ghatee, Sh. Ayatollahi, A. Alamdari, T. Sedghamiz" Investigating the effect of different asphaltene structures on surface topography and wettability alteration", Applied Surface Science, Vol.257, Issue 20, pp 8341-8349, 2011.

41. **J. Sayyad Amin**, A. Alamdari, N. Mehranbod, Sh. Ayatollahi, and E. Nikooee, "Prediction of Asphaltene Precipitation: Learning from Data at Different Conditions", Energy and Fuels, Vol.24, pp 4046- 4053, 2010.

42. **J. Sayyad Amin**, E. Nikooee, Sh. Ayatollahi, A. Alamdari, "Investigating wettability alteration due to asphalteneprecipitation:Imprints in surface multifractal characteristics", Applied Surface Science, Vol.256, Issue 256, pp 6466-6472, 2010

44. **J. Sayyad Amin**, Sh. Ayatollahi, A. Alamdari, "Fractal characteristics of an asphaltene deposited heterogeneous surface", Applied Surface Science, Vol. 256, pp. 67-75, 2009.

45. D. Mowla, **J. Sayyad Amin**, "Simulation of Heap Leaching Process by PSPD Mode", Iranian Journal of Science & Technology, Transaction B, Engineering, Vol.33, No.23, pp 253-265, 2009.

46. M. R. Rahimpour, A. Abbasloo, **J. Sayyad Amin**, "A Novel Radial-Flow, Spherical-Bed Reactor Concept for Methanol Synthesis in the Presence of Catalyst Deactivation" Chemical Engineering & Technology Volume 31 Issue 11, pp 1615 – 1629, 2008.

Publications (Persian)

" پیش بینی میزان سولفیدهیدروژن و دی اکسیدکربن خروجی از برج شیرین سازی پالایشگاه گاز پارس جنوبی به‌کمک شبکه عصبی" ، جواد صیاد امین، سمیرا کشاورز بابایی‌نژاد، مقاله 12، دوره 10، شماره 52، زمستان 1394، صفحه 179–188