

Mohammad Reza Sardashti Birjandi

Assistant Professor

Faculty : Engineering

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Education

- B.Sc, Chemical Engineering,Sistan and Baluchestan University - 2008
- MS, Chemical Enginering Processes Design,Sistan and Baluchestan University - 2010
- PhD, Chemical Engineering,Sistan and Baluchestan University - 2018
- PhD, chemical Engineering,Sistan and Baluchestan University - 2018

Courses

1. Technical drawing 1
2. fundamentals of Mineral Chemical Industries
3. Engineering Matehmatics
4. Differential equations
5. applied mathematics in chemical engineering
6. Optimization
7. Optimization
8. General chemistry in chemical engineering

Master Thesis

1. Production efficiency optimazation, External costs, CO2 emissions, Kiln department, Cement industry

سونیا شعلي بر, [Mohammad Reza Sardashti Birjandi, Mir mohammad Khalilipour langroudi, Somayeh Mansouri, Jafar Sadeghi, Bahareh Bidar, Ghodratollah Roudini]

نیمسال دوم سال تحصیلي 1404-1403

2. Dynamic Simulation of the Amine Unit at Abadan Refinery

عبدالله پیام, [Mohammad Reza Sardashti Birjandi, Farhad Shahraki, Jafar Sadeghi, Vajihe Yousefi, Bahareh Bidar, Pooria Akbarzadeh]

نیمسال دوم سال تحصیلي 1404-1403

3. Predicting Particle Fineness in Cement Mill by Machine Learning Techniques in Khash Cement Company

فرشته نورریگي, [Bahareh Bidar, Mohammad Reza Sardashti Birjandi, Somayeh Mansouri, Jafar Sadeghi, Vajihe Yousefi, Amir Hossein Kazemian]

نیمسال اول سال تحصیلي 1404-1403

4. Numerical simulation of gas turbine meters performance in gas flows containing black powder particles

مهدي اسماعیلي, [Farhad Shahraki, Mohammad Reza Sardashti Birjandi, , Mortaza Zivdar, Bahareh Bidar, , Bahareh Pirzadeh]

نیمسال دوم سال تحصیلي 1403-1402

5. Experimental study of the effect of roughness, surface material on subcooled pool boiling heat transfer coefficient of pure water

محدثه بامري, [Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Samane Hamzekhani, Mir mohammad Khalilipour langroudi, Bahareh Bidar, Arash Naderi]

نیمسال اول سال تحصیلي 1403-1402

6. Investigating effective factors in reducing energy consumption in the calcination process of magnesium carbonate with different purity.

محمد سیادت, [Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Bahareh Bidar, Hamid Moghadam Deymeh, Davod Mohebbi Kalhori, Ghodratollah Roudini]

نیمسال دوم سال تحصیلي1401

7. Investigating the possibility of replacing LPG feed with normal butane in the alkylation unit of Abadan Refinery

پریسا جلالي نیا, [Farhad Shahraki, Mir mohammad Khalilipour langroudi, Mohammad Reza Sardashti Birjandi, Davod Mohebbi Kalhori, Bahareh Bidar, Alireza Shahraki]

نیمسال دوم سال تحصیلي1401

8. Investigating new methods of caustic wastewater treatment in Adurant Phase 1 Refinery of South Pars Gas Complex (SPGC)

علیرضا شهسواري, [Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Mir mohammad Khalilipour langroudi, Abdolreza Samimi, Ali Akbar Daya]

نیمسال دوم سال تحصیلي1401

9. Prediction of control parameters of cement rotary kiln using machine learning models

سمیه منصوري, [Farhad Shahraki, Jafar Sadeghi, Mohammad Reza Sardashti Birjandi, N N, Bahareh Bidar, Mortaza Zivdar, , Esmaeil Tohidlou]

نیمسال دوم سال تحصیلي1401

10. Investigating the Effect of Temperature Changes in Static Naphthalene Refiners to Reduce Residual Naphthalene Oil

فريد كاظمي نورالدين وند, [Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Bahareh Bidar, Mir mohammad Khalilipour langroudi, Jafar Sadeghi, Mahdi Shafiee Afarani]

نيمسال اول سال تحصيلي 1401-1402

11. Investigation of linear and non-linear programming on the refinery network structure

محدثه پودينه, [Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Mir mohammad Khalilipour langroudi, Jafar Sadeghi, Davod Mohebbi Kalhori, Pooria Akbarzadeh]

نيمسال اول سال تحصيلي 1401-1402

12. Optimization of execution, management of pre-startup operations and start-up operations of area 40 of ethylene production using the Opercom method through ICAPS software

فرهاد ابراهيمي, [Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Bahareh Bidar, Jafar Sadeghi, Mir mohammad Khalilipour langroudi, Seyed roohallah Mousavi]

نيمسال اول سال تحصيلي 1401-1402

13. feasibility study and simulation of high purity ethylene and propylene recovery from the offgas of fcc unit of Abadan refinery

مجتبي عباس نژاد, [Farhad Shahraki, Bahareh Bidar, Mohammad Reza Sardashti Birjandi, Jafar Sadeghi, Mortaza Zivdar, Hamed Khosravi]

نيمسال دوم سال تحصيلي 01-00

14. Simulation of ABADAN Oil Refinery Sour Water Stripper Pre-Heated Heat Exchanger and its thermal performance improvement

شهاب شهركي, [Samira Payan, Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Jafar Sadeghi, Alireza Hossein Nezhad Devin, Moheb Ali Rahdar]

نيمسال اول سال تحصيلي 01-00

15. Investigation the environmental effect of using different type of fuels in industrial furnaces

مه لقا نوروزي حصاري, [Mir mohammad Khalilipour langroudi, Mohammad Reza Sardashti Birjandi, Jafar Sadeghi, Kiyanoosh Razzaghi, Hadi Bejari Valam]

نيمسال دوم سال تحصيلي 00-99

16. modeling and optimization of desalter unit Abadan refinery

فائزه ريگي, [Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Bahareh Bidar]

نيمسال اول سال تحصيلي 00-99

17. optimization of hydrogen network structure by lagrange method in refinery

پروانه ناروئي محمد, [Mir mohammad Khalilipour langroudi, Farhad Shahraki, Mohammad Reza Sardashti Birjandi]

نيمسال اول سال تحصيلي99-98

18. Energy recovery the rotary kiln of cement Neyriz

محمدحسين نجف زاده, [Farhad Shahraki, Mohammad Reza Sardashti Birjandi]

نيمسال اول سال تحصيلي99-98

19. energy analysis and economic assessment of gas turbine plant in combination with solar power plant and combind cycle

حافظ نوري كتج, [Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Bahareh Bidar]

نيمسال اول سال تحصيلي99-98

20. Simulation and review of effective factors on the improvement of solar stills

فروغ دراني, [Farhad Shahraki, Mohammad Reza Sardashti Birjandi]

نيمسال دوم سال تحصيلي 98-97

Journals Papers

2025

1. Biomass to Sustainable Biofuels: A Novel Hybrid Process Integrating CO? CPU and High-Temperature Syngas for Methanol/DME Synthesis4E Analyses with Multi-objective Optimization (NSGA-II)

Mohammad Mirani, Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Mehdi Bayat, Asiyeh Sheikhzadeh-

Results in Engineering Volume: (27) 1 - 18

2. Sonotherapy Using Folic Acid-Ag-Bi2O3 Nanocomposites in 2D and 3D Cultural C540 Melanoma Cells

Mina Sarani, Paria Tamaddon, Hanieh Haghighi, Hossein Heli, Majid Darroudi, Arash Safari, Mohammad R

Journal of Biomedical Physics and Engineering Volume: (15) 423 - 436

3. Optimization of Refinery Network Structure Using Mathematical Modeling

Mohadeseh Poudineh, Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Mir mohammad Khalilipour lang

Volume: (35) 92 - 103

2024

4. Using Response Surface Methodology Approach to Modeling and Optimization of the Combustion Process in Cement Kiln

Somayeh Mansouri, Farhad Shahraki, Jafar Sadeghi, Mohammad Reza Sardashti Birjandi, Esmaeil Koohesta

CHEMICAL ENGINEERING and TECHNOLOGY Volume: (47) 875 - 886

5. Experimental investigation of energy consumption and CO2 emission in cement kiln in effect of replacement natural pozzolan

Farhad Shahraki, Somayeh Mansouri, Jafar Sadeghi, Esmaeil Koohestanian, Mohammad Reza Sardashti Birj

IRANIAN JOURNAL OF CHEMISTRY and CHEMICAL ENGINEERING-INTERNATIONAL ENGLISH EDITION Volume: (43) 382 - 394

6. Modeling of an Industrial Incinerator for Refinery Wastes and Investigating the Effective Parameters for Performance Improvement

Mohsen Bahoosh, Bahareh Bidar, Mohammad Reza Sardashti Birjandi, Farhad Shahraki

Volume: (22) 103 - 122

2023

7. بررسي مديريت توليد و بهينه سازي گاز هيدروژن

Parvane Naroeimohammad, Mir mohammad Khalilipour langroudi, Farhad Shahraki, Mohammad Reza Sardashti

Volume: (17) 19 - 38

8. Consequences modeling and determining of safe distance in the natural gas pressure reduction station using PHAST software (Case study: Borumi station in Ahvaz)

Ahmad Torfi Alivi, Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Mir mohammad Khalilipour langr

Volume: (15) 37 - 57

9. Simulation and Evaluation of Effective Solutions in Reducing Mercaptan and Sulfur in Liquid Gas Exit in Sulforex Unit

Mehdi Hamedi Siam, Farhad Shahraki, Mohammad Reza Sardashti Birjandi, Bahareh Bidar, Mohammad Esmaei

Volume: (18) 46 - 66

10. Energy recovery from the rotary kiln of white cement Neyriz

Mohammad Hossein Najafzade, Mohammad Reza Sardashti Birjandi, Farhad Shahraki, Somayeh Mansouri

Volume: (21) 201 - 228

11. بررسي تأثير افزايش تعداد پله ها و افزودن بافل در آب شيرين كن خورشيدي پلكاني

, Mohammad Reza Sardashti Birjandi, Farhad Shahraki

Volume: (42) 313 - 325

12. شبيه سازي، كنترل و آناليز حساسيت كوره هاي شكست حرارتي واحد الفين پتروشيمي مروارید

Benyamin Jahantigh, Mohammad Reza Sardashti Birjandi, Jafar Sadeghi, Farhad Shahraki

Volume: (42) 371 - 385

13. Simulation and Investigation of H2S Adsorption Effects by Molecular Sieve 4A for Separation from Natural Gas

Aqil Khodabakhsh, Bahareh Bidar, Mohammad Reza Sardashti Birjandi, Farhad Shahraki

Volume: (15) 25 - 39

2022

14. One-dimensional Modelling and Optimisation of an Industrial Steam Methane Reformer

Mojtaba Sinaei Nobandegani, Tayebeh Darbandi, , Mohammad Reza Sardashti Birjandi, Farhad Shahraki, L

CHEMICAL AND BIOCHEMICAL ENGINEERING QUARTERLY Volume: (35) 369 - 379

15. Modeling and Optimization of the Bubble Detachment Diameter for a Pool Boiling System

Samane Hamzekhani, Mohammad Reza Sardashti Birjandi, Farhad Shahraki

CHEMICAL ENGINEERING and TECHNOLOGY Volume: (45) 1036 - 1047

16. بهينه سازي شبكه هيدروژن با استفاده از مديريت دي اكسيدكربن

Parvane Naroeimohammad, Mir mohammad Khalilipour langroudi, Farhad Shahraki, Mohammad Reza Sardashti

Volume: (32) 108 - 123

17. Stable and Dynamic Simulation of Gas Sweetening Unit by Alternative Solvent

Zahra Zandi lak, Mohammad Reza Sardashti Birjandi, Farhad Shahraki, Jafar Sadeghi

Volume: (14) 57 - 73

18. Coupled simulation of convection section and the fluid flow in the furnace tubes H-151 of Distillation Unit of Esfahan Refinery by CFD

Fatemeh Karimiyan, Mohammad Reza Sardashti Birjandi, Farhad Shahraki

Volume: (20) 189 - 205

19. ynamic Simulation and Investigation of Changes in Operating Parameters on the Amount of Sulfur Produced in the SRU Unit - a Case Study of the No 1 Refinery of South Pars Gas Complex

Alireza Shahsavari, Alireza Binaee, Mohammad Reza Sardashti Birjandi, Farhad Shahraki, Jafar Sadeghi

Volume: (9) 57 - 75

2021

20. Investigation of the Impact of Salt Water Depth on Stair Solar Desalination Using Comsol Software

, , Mohammad Reza Sardashti Birjandi, Farhad Shahraki

Volume: (12) 58 - 70

21. Simulation and Performance Improvement of Mercaptan Removal Unit of South Pars Gas Company by designing a new process cycle

Reza Seyed abadi, Bahareh Bidar, Mohammad Reza Sardashti Birjandi, Farhad Shahraki

Volume: (13) 17 - 36

2020

22. Simulation and optimization of sulfur recovery unit in Ilam gas refinery by response surface methodology

Asma Taherinia, Farhad Shahraki, Mir mohammad Khalilipour langroudi, Mohammad Reza Sardashti Birjand

Volume: (11) 19 - 32

23. Investigating efficiency improvement in sulfur recovery unit using process simulation and numerical modeling

Farhad Fazlollahi, Sajjad Asadizadeh, Milad Ahmadi Khoshooei, Mohammad Reza Sardashti Birjandi, Maji

Oil and Gas Science and Technology-Revue d IFP Energies nouvelles Volume: (76) 1-18 - 9-18

2019

24. Hydrogen and CO2 Management in the Refinery with Fuzzy Multiobjective Nonlinear Programming

Mohammad Reza Sardashti Birjandi, Farhad Shahraki, Kiyanoosh Razzaghi

CHEMICAL ENGINEERING and TECHNOLOGY Volume: (42) 1941 - 1951

25. investigation the effective factors to improve the performance of catalytic conversion unit

Ehsan Ghofran Mozaffar, Mohammad Reza Sardashti Birjandi, Farhad Shahraki

Volume: (13) 5 - 31

2023

1. Optimization of Sulfur Recovery Unit of Abadan Refinery using Response Surface Method (RSM)

The 12th International Chemical Engineering Congress Exhibition (IChEC 2023)

, Bahareh Bidar, Mohammad Reza Sardashti Birjandi, Farhad Shahraki

2. Improving the Process Performance of the Reverse Osmosis (RO) Unit of Abadan Oil Refinery by Changing the Membrane

The 12th International Chemical Engineering Congress Exhibition (IChEC 2023)

, Bahareh Bidar, Mohammad Reza Sardashti Birjandi, Farhad Shahraki

2021

3. Investigation and simulation of convection section of a refinery distillation unit furnace with CFD

CHISA 2021 VIRTUALLY - 24th International Congress of Chemical and Process Engineering

Mohammad Reza Sardashti Birjandi, Farhad Shahraki, Kiyanoosh Razzaghi, Fatemeh Karimiyan, Tayebeh Darbandi

2019

4. Adsorption Process Simulation in Natural Gas Mercaptan Removal Unit and Study on the effects of Operational Variables

The 6th IRANIAN NATIONAL ZEOLITE CONFERENCE

Reza Seyed abadi, Farhad Shahraki, Bahareh Bidar, Mohammad Reza Sardashti Birjandi

Executive activities

مدير گروه آموزشي مهندسي شيمي

from 1403/11/02 - now

مشاوره دانشجويان كارشناسي

from 1403/07/01 - to 1403/11/05

مشاوره دانشجويان كارشناسي

from 1402/11/21 - to 1403/04/04

مشاوره دانشجويان كارشناسي

from 1402/07/01 - to 1402/11/05

مدير مسئول مجله chemical process design

from 1401/10/28 - now