



# Gas Processing Journal

**Scientific Journal**

**ISSN (Print): 2322-3251**

**ISSN (Online): 2345-4172**

**Publisher: University of Isfahan**

**10th year, No. 2, 2022**

## Editors-in-Chief

**Mohammad S. Hatamipour**  
University of Isfahan  
hatami@eng.ui.ac.ir

## Director

**Amir Rahimi**  
University of Isfahan  
rahimi@eng.ui.ac.ir

## Executive Manager

**Zahra Zohrabi**  
gpj@res.ui.ac.ir

## Editors

## Editorial Board

**David A. Wood**  
DWA Energy Limited, Lincoln LN5 9JP, UK

**Majeda Khraisheh**  
Qatar University

**Amir Hossein Mohammadi**  
University of KwaZulu-Natal

**Hussameldin Ibrahim**  
University of Regina

**M. Rafiqul Islam**  
Emertec Research and Development Ltd

**Sohrab Zendehboudi**  
Memorial University

**Ali Eslamimanesh**  
Tarbiat Modares University

**Ali Mohebbi**  
Shahid Bahonar University of Kerman

**Jafar Javanmardi**  
Shiraz University of Technology

**Morteza Behbahani Nezhad**  
Shahid Chamran University of Ahvaz

**Ahmad Moheb**  
Isfahan University of Technology

**Alireza Solaimani Nazar**  
University of Isfahan

**Majid Amidpour**  
K. N. Toosi University of Technology

**Mehdi Mehrpooya**  
University of Tehran

**Mohammad Hojjat**  
University of Isfahan

**Mohammadreza Talaie**  
University of Shiraz

## Indexing and Abstracting

Gpj Electronic Database	<a href="http://Gpj.ui.ac.ir">http://Gpj.ui.ac.ir</a>
ISC: Islamic World Science Citation center	<a href="http://www.isc.gov.ir">http://www.isc.gov.ir</a>
DOAJ: Directory of Open Access Journals	<a href="https://B2n.ir/j28808">https://B2n.ir/j28808</a>
Sherpa Romeo	<a href="https://v2.sherpa.ac.uk/id/publication/44175">https://v2.sherpa.ac.uk/id/publication/44175</a>
CAS Source Index (CASSI)	<a href="https://B2n.ir/t84016">https://B2n.ir/t84016</a>
Google Scholar	<a href="https://B2n.ir/x61928">https://B2n.ir/x61928</a>
Ulrichsweb: Global serials Directory	<a href="http://ulrichsweb.serialssolutions.com">http://ulrichsweb.serialssolutions.com</a>
EBSCO Host Databases	<a href="https://www.ebsco.com">https://www.ebsco.com</a>
SID: Scientific Information Database	<a href="http://www.sid.ir">http://www.sid.ir</a>
Magiran: Journals Database	<a href="http://www.magiran.com">http://www.magiran.com</a>
Applied Science & Technology Source Ultimate	<a href="https://B2n.ir/f47003">https://B2n.ir/f47003</a>
Applied Science & Technology Source	<a href="https://B2n.ir/n68703">https://B2n.ir/n68703</a>

## Address

✉ Gas Processing Journal  
Office UI Press,  
Central Library Building,  
University of Isfahan  
Hezarjarib Ave.  
Isfahan, Iran  
Postal Code: 8174673441

## Contact Info

☎ **Phone** (0098) 31 37934335  
☎ **Fax** (0098) 31 37932177  
@ **Email** [gpj@res.ui.ac.ir](mailto:gpj@res.ui.ac.ir)

## TABLE OF CONTENTS

- **Using the DOE Concept to Determine the Appropriate Operating Conditions for the D87 Heavy-Duty Diesel Engine under RCCI Combustion Fueled with Diesel Fuel and Natural Gas** 1-12  
Mohammad Reza Salmani Marasht; Seyed Ali Jazayeri; Mojtaba Ebrahimi
- **Developing a model for calculating pure gas thermal conductivity at P=1bar using particle swarm optimization algorithm** 13-24  
Amirhossein Oudi; Samaneh Faramarzi; Shiva Yarmohammadian; Yegane Davoodbeygi
- **Enhancing Gasoline Hydro-Desulfurization in a Fixed Bed Reactor: A Computational Fluid Dynamics (CFD) Study** 25-36  
Zohreh Rahimi-Ahar; Abbas Sohrabi; Abbas Ghareghashi
- **Optimizing the clearance dimensions of the gas turbine combustion chambers using the Taguchi method** 37-52  
Ghodrat Ghassabi; Reza Shahraki shahdabadi; Poriya Lotfi; Fatemeh Tavakoli Dastjerd
- **Proposing a ceramic-based nanofiltration system to capture nanoparticles used in the gas processing industry** 53-64  
Hamid Talebi; Hossain Nemati; Ehsan Selahi
- **Tapping the benefits of using geothermal energy and absorption refrigeration system in the precooling part of a hydrogen liquefaction cycle** 65-74  
Mahdieh Shavandi; Saman Faramarzi; Mostafa Mafi