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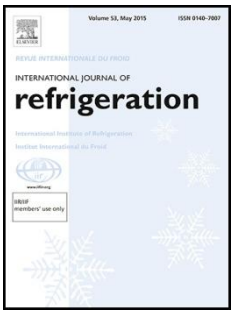

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Author: Mohamed Ghazy, K. Harby, Ahmed A. Askalany, Bidyut B. Saha

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Adsorption isotherms and kinetics of activated carbon/Difluoroethane adsorption pair: theory and experiments

Mohamed Ghazy[a], K. Harby[b], Ahmed A. Askalany[a,*], Bidyut B. Saha[c,d]

[a]Mechanical Engineering Department, Faculty of Industrial Education, Sohag University, Sohag, 82524, Egypt

[b]Mechanical Power Engineering and Energy Department, Faculty of Engineering, Minia University, Minia 61517, Egypt

[c]Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, 6-1 Kasuga-Koen, Kasuga-Shi, Fukuoka 816-8580, Japan

[d]International Institute for Carbon-Neutral Energy Research (WPI-I2CNER), Kyushu University

[*]Corresponding Author, Tel: +201028721274

E-mail: ahmed_askalany3@yahoo.com

Highlights

- Experimental adsorption isotherms of Maxsorb III/HFC-152a have been investigated.
- Adsorption isotherms of Maxsorb III/HFC-152a have been fitted with D-A and Tóth models.
- Isosteric heat of adsorption has been presented.
- Adsorption kinetics have been investigated experimentally and theoretically.

Abstract

This study introduces a new adsorbent/refrigerant pair to be used in adsorption cooling applications. Adsorption isotherms and kinetics of Difluoroethane (HFC-152a) onto highly porous activated carbon Maxsorb III at temperatures ranging from 25 to 75^{o}C have