Absorption of Flue-Gas Components by Ionic Liquids

Gas separation by ionic liquids (ILs) is a promising new research field with several potential applications of industrial interest. Thus cleaning of industrial off gases seems to be attractive by use of ILs and Supported Ionic Liquid Phase (SILP) materials. The potential of selected ILs for absorption of NOX, CO2 and SO2 are demonstrated and the possible mechanism of absorption described on the molecular level. Special focus regards the interaction of the ILs with water vapor, which is an important feature in envisaged application of flue gas cleaning in power plants, waste incineration plants, cement and glass factories as well as on board ships.

General information
State: Published
Organisations: Department of Chemistry, Centre for Catalysis and Sustainable Chemistry, Universite d'Aix-Marseille III
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Pages: 97-108
Publication date: 2014
Peer-reviewed: Yes

Publication information
Journal: ECS Transactions
Volume: 64
Issue number: 4
ISSN (Print): 1938-5862
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 0.44 SJR 0.225 SNIP 0.252
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 0.4 SJR 0.228 SNIP 0.253
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 0.36 SJR 0.211 SNIP 0.244
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 0.36 SJR 0.212 SNIP 0.234
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 0.27 SJR 0.192 SNIP 0.231
ISI indexed (2013): ISI indexed no
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 0.29 SJR 0.241 SNIP 0.26
ISI indexed (2012): ISI indexed no
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 0.36 SJR 0.261 SNIP 0.28
ISI indexed (2011): ISI indexed no
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.249 SNIP 0.251
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.242 SNIP 0.27
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.254 SNIP 0.255
Scopus rating (2007): SJR 0.213 SNIP 0.206
Scopus rating (2006): SJR 0.134 SNIP 0.073
Original language: English
Electronic versions:
ECS2014PaperRF_final.pdf
DOIs:
10.1149/06404.0097ecst
Source: PublicationPreSubmission
Source-ID: 105210803
Research output: Research - peer-review | Conference article – Annual report year: 2015