

Demagnetization factor for a powder of randomly packed spherical particles - DTU Orbit (09/11/2017)

Demagnetization factor for a powder of randomly packed spherical particles

The demagnetization factors for randomly packed spherical particle powders with different porosities, sample aspect ratios, and monodisperse, normal, and log-normal particle size distributions have been calculated using a numerical model. For a relative permeability of 2, comparable to room temperature Gd, the calculated demagnetization factor is close to the theoretical value. The normalized standard deviation of the magnetization in the powder was 6.0%-6.7%. The demagnetization factor decreased significantly, while the standard deviation of the magnetization increased, for increasing relative permeability. © 2013 AIP Publishing LLC

General information

State: Published

Organisations: Department of Energy Conversion and Storage, Electrofunctional materials

Authors: Bjørk, R. (Intern), Bahl, C. R. (Intern)

Number of pages: 4

Pages: 102403

Publication date: 2013

Main Research Area: Technical/natural sciences

Publication information

Journal: Applied Physics Letters

Volume: 103

Issue number: 10

ISSN (Print): 0003-6951

Ratings:

BFI (2017): BFI-level 2

Web of Science (2017): Indexed yes

BFI (2016): BFI-level 2

Scopus rating (2016): CiteScore 2.67 SJR 1.132 SNIP 0.996

Web of Science (2016): Indexed yes

BFI (2015): BFI-level 2

Scopus rating (2015): SJR 1.085 SNIP 0.983 CiteScore 2.47

Web of Science (2015): Indexed yes

BFI (2014): BFI-level 2

Scopus rating (2014): SJR 1.799 SNIP 1.462 CiteScore 3.25

Web of Science (2014): Indexed yes

BFI (2013): BFI-level 2

Scopus rating (2013): SJR 2.149 SNIP 1.652 CiteScore 3.77

ISI indexed (2013): ISI indexed yes

Web of Science (2013): Indexed yes

BFI (2012): BFI-level 2

Scopus rating (2012): SJR 2.554 SNIP 1.754 CiteScore 3.76

ISI indexed (2012): ISI indexed yes

Web of Science (2012): Indexed yes

BFI (2011): BFI-level 2

Scopus rating (2011): SJR 2.805 SNIP 1.94 CiteScore 4.04

ISI indexed (2011): ISI indexed yes

Web of Science (2011): Indexed yes

BFI (2010): BFI-level 2

Scopus rating (2010): SJR 2.926 SNIP 1.789

Web of Science (2010): Indexed yes

BFI (2009): BFI-level 2

Scopus rating (2009): SJR 2.857 SNIP 1.848

Web of Science (2009): Indexed yes

BFI (2008): BFI-level 2

Scopus rating (2008): SJR 2.934 SNIP 1.83

Web of Science (2008): Indexed yes

Scopus rating (2007): SJR 3.039 SNIP 1.913

Web of Science (2007): Indexed yes

Scopus rating (2006): SJR 3.457 SNIP 2.288

Web of Science (2006): Indexed yes

Scopus rating (2005): SJR 3.709 SNIP 2.382

Web of Science (2005): Indexed yes

Scopus rating (2004): SJR 3.904 SNIP 2.38

Web of Science (2004): Indexed yes

Scopus rating (2003): SJR 3.765 SNIP 2.27

Web of Science (2003): Indexed yes

Scopus rating (2002): SJR 3.917 SNIP 2.365

Web of Science (2002): Indexed yes

Scopus rating (2001): SJR 4.111 SNIP 2.212

Web of Science (2001): Indexed yes

Scopus rating (2000): SJR 4.277 SNIP 2.013

Web of Science (2000): Indexed yes

Scopus rating (1999): SJR 4.35 SNIP 2.11

Original language: English

Electronic versions:

Demagnetization_factor_for_a_powder_of_randomly_packed_spherical_particles.pdf

DOIs:

10.1063/1.4820141

Bibliographical note

Copyright (2013) American Institute of Physics. This article may be downloaded for personal use only. Any other use requires prior permission of the author and the American Institute of Physics. The following article appeared in Appl. Phys. Lett. 103, 102403 (2013) and may be found at <http://apl.aip.org/resource/1/APPLAB/v103/i10>

Source: dtu

Source-ID: n::oai:DTIC-ART:inspec/392635911::32351

Publication: Research - peer-review › Journal article – Annual report year: 2013