

凝聚态物理-北京大学论坛

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**Novel oxidation state of iron, peroxide FeO_2 :
Understanding physical properties and implication to geoscience**

Prof. DuckYoung Kim

时间: 9月13日 (星期四) 15:00—16:30

地点: 北京大学物理大楼中212教室

Discovery of novel oxidation state of iron, FeO_2 under pressure, becomes great interest of scientific communities, and especially it suggests a paradigm change to our conventional understanding of geoscience. While our multiple follow-up research results from geoscience perspectives provides alternating chemical paths to synthesize it and substantial evidences of the existence at the deep lower mantle conditions, there are much room for condensed matter community to tackle it. In this presentation, first I introduce computational theory group of HPSTAR with several key research directions. I would like to show recent theoretical results of our collaboration teams combined with experimental results to emphasize how condensed matter theoretical works can be related and interpreted to the understanding of the Earth. I will show results for metal-insulator transition, spin transition, and molecular dynamic simulation.

Prof. DuckYoung Kim,
2009-2011

HPSTAR

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2011-2014

2014

2015 12

HPSTAR Kim

HPSTAR

SCI

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Nature

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Nature

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PNAS

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PRL

2010

Benzehus

2013

Ångströms

AIRAPT

2012

Jamieson

2017

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<http://www.phy.pku.edu.cn/~icmp/forun/2018/2018qiu.xml/>

Photoed by Xiaodong Hu