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研究方向	

详细描述

Gaolin Yan

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EDUCATION

Ph.D., (Metallurgy and Materials)The University of Birmingham, UK, 1999-2003

M.Phil.,(Metallurgy and Materials)The University of Birmingham, UK, 1997-1999
B.Eng.,(Metal Physics)The University of Science and Technology,Beijing, 1983-1987

严高林,湖北人，师从I R Harris教授（Rex Harris 教授为英国皇家工程院 院士、第十三届国际稀土永磁及应用会议主席（REPM）、欧洲磁体联合研究行动主要发起人（CEAM）、高性能稀土永磁大规模制造技术主要原创人，稀土永磁氢爆（HD）和稀土永磁与氢歧化反应（HDDR）原创人，“稀土永磁及氢能源”主要倡导发起人)。

严高林教授已完成多项稀土永磁研究任务，部分发表的研究结果被国外稀土永磁科学技术领域原创人:P.J.McGuiness(HDDR原创人之一)，M.Sagawa及科研人员L. Schultz,，清华大学朱静院士，钢铁研究总院李卫教授等所引用。

严高林与I R Harris 、P J McGuiness等科学家首创了稀土永磁的循环利用和使用减量化重稀土镝制备高矫顽力稀土永磁技术，对拟消耗大量稀土资源、以电动汽车和风力发电机组为代表的现代绿色工业大规模进一步发展具有实质意义。 在以后一段时期（更强、可移动稳定磁场出现之前），为应对石油能源枯竭和CO2排放导致全球气候的改变和减缓极端气候发生，占稀土用量过半的稀土永磁需求份额将会持续增长。稀土永磁自身特性赋予了其在我国清洁能源技术和其相关民生高科技产业化应用和人类可持续发展方面的关键地位 。

严高林研究领域：稀土永磁及应用。

合作伙伴：I R Harris 英国皇家工程院院士、P J McGuiness高级研究员、Alan Walton (seniour research fellow)、周寿增教授、胡伯平研究员，梁奇博士等

Research Interests

Processing, properties , characterization and applications of permanent magnets based on rare earth- transition metal alloys
Processing, properties,characterization and applications of novel high density and near room

temperature hydrogen storage materials.
Processing, properties,characterization and applications of TMR ,GMR、Magnetostrictive materials and Magnetocaloric Materials.
The alloy reaction of rare earths with a particular interest with hydrogen.

The nature of the interactions of hydrogen with materials.
Hydrogen based recycling of rare earth permanent magnetic materials.

PROFESSIONAL SOCIETY

湖北欧美同学会 理事

国家人事部留学人员择优资助获得者

国家自然科学基金项目、国家发改委高新技术材料产业化项目及国家科技奖评委等。

国家发明专利

1、《退化稀土永磁材料再生高性能稀土永磁体的方法》；专利号：ZL 200610018869.4；授权公告号：CN 100454449C;

2、《钕铁硼中添加重稀土氢化物制备高矫顽力稀土永磁体的优化处理方法》,专利申请号：201110372517.X;

Major Publications

1. Gaolin Yan*, P.J. McGuiness, J.P.G. Farr, I.R. Harris, Optimisation of the processing of Nd-Fe-B with dysprosium addition， Journal of Alloy and Compounds, Volume 491, Issues 1-2, 18 February 2010, Pages L20-L24 , (doi:10.1016/j.jallcom.2009.10.202) .

2. Gaolin Yan*, P.J.McGuiness, J.P.G.Farr and I.R.Harris, Environmental Degradation of NdFeB magnets, Journal of Alloy and Compounds, Pages 188-192, Volume 478, Issues 1-2, 10 June 2009 .
3. Gaolin Yan*,Effect of Magnetization on Hydrogen Decrepitation for Nd16Fe76B8 Sintered Magnet, Applied Physics Letters, 2006, Vol.89, Issue:17, 172503.
4. Gaolin Yan*, A.J.Williams, J.P.G.Farr and I.R.Harris, Effect of Density on Corrosion Behaviour of Nd-Fe-B magnets, Journal of Alloy and Compounds, pp: 266-274, Volume:292,1999.
5. Gaolin Yan*, J.Shi, P.J.McGuiness,J.P.G.Farr and I.R.Harris, A corrosion study of NdFeB magnets, Rare Earth Permanent Magnets and Their Applications(REPM'08), 2008, pp.163-167，ISBN978-960-B6733-6-6（国际稀土永磁及应用大会邀请报告，）.
6. Yue Zhang, Chunlong Fei, Yong Liu, Rongjuan Wang, Gaolin Yan*, Rui Xiong, and Jing Shi, Effects of Surface Modification on the Magnetic Properties of CoFe2O4 Nano-Particles Synthesized by Hydrothermal Method， Journal of Nanoscience and Technology, 10, 1-5, 2010.
7. Marko Soderznik, Paul J .McGuiness, Kristina Zuzek-Rozman; Gaolin Yan, Irena Skulj; Spomenka Kobe, A high-resolution FEG-SEM investigation of anisotropic hydrogen decrepitation in Nd-Fe-B-based sintered magnets, Journal of Applied Physics, 2010.
8. The corrosion behaviour of Nd-Fe-B and the Negative Harris Effect/ by Yan,Gaolin . Thesis (MPhil) - University of Birmingham, School of Metallurgy and Materials. 1999. Number: M0217354BU
9. An investigation of sintered neodymium iron boron magnets with dysprosium additions / by Yan,Gaolin, Thesis (PhD) - University of Birmingham, Department of Metallurgy and Materials. 2003. Number: M0237756BU
10.关于稀土永磁科技专著《Magnetism and Magnetic Materials》, 湖北科技出版社 [ISBN978-7-5352-3708-8;中国版本图书馆CIP数据核字（2008）第188273号],2008.

Opportunity:Welcomes diversity in this research group and encourages applications from all qualified candidates all over the world.