

Curriculum Vitae

(1) PERSONAL INFORMATION

Hua-Xin Peng (*BEng MSc PhD*)
 Advanced Composites Centre for Innovation and Science (ACCIS)
 Department of Aerospace Engineering, University of Bristol,
 University Walk, Bristol, BS8 1TR. UK.

(2) PRESENT APPOINTMENT

Professor of Aerospace Materials (since 8/2012)
 Deputy Director, Bristol Centre for NanoScience and Quantum Information (NSQI)

(3) PREVIOUS APPOINTMENTS

Date	Job Title	Organisation
8/2009-7/2012	Reader	Bristol University, Aerospace Engineering, Bristol, UK
8/2006-7/2009	Senior Lecturer	Bristol University, Aerospace Engineering, Bristol, UK
10/2002-7/2006	Lecturer	Bristol University, Aerospace Engineering, Bristol, UK
1/2001-10/2002	Research Fellow	Oxford University, Department of Materials, Oxford, UK
1/1998 - 1/2001	Postdoctoral RA	Brunel University, Department of Materials Eng, UK
7/1996 -12/1997	Lecturer	Harbin Institute of Technology Harbin, P.R. China

(4) ACADEMIC QUALIFICATIONS

4/1993-7/1996	School of Mat. Sci. Eng., Harbin Institute of Technology (HIT), P. R. China. Ph.D. in Composite Materials Thesis: In-situ reaction processed Al ₂ O ₃ -Al ₃ Ti-Al Metal Matrix Composites <i>Award of Excellent Doctoral Thesis (29/7/1996).</i>
9/1990-3/1993 (2.5 years)	School of Mat. Sci. Eng., Harbin Institute of Technology (HIT), P. R. China. M.Sc. in Materials Science Thesis: Wear behaviour of SiCw reinforced aluminium matrix composites Gold Medal Prize for excellence in Master degree research(31/3/1993)
9/1986-7/1990 (4 years)	School of Mat. Sci. Eng., Zhejiang University (member of WUN), P. R. China. B.Eng. in Physical Metallurgy <i>Distinguished first class honours (10/7/1990); Model student award (1987/8/9)</i>

(5) SPECIAL AWARDS, HONOURS AND DISTINCTIONS

Date	Description	Awarding body
7/2011-	Visiting Professor, Harbin Institute of Technology (HIT)	Harbin Institute of Tech, China
04/2005	University Learning and Teaching Award	Bristol University
06/2002	<i>Johnson Matthey Trophy</i> in metallographic competition.	Oxford Materials Society, IOM3.
09/2002	<i>Merit Award</i> in recognition of "exceptional contribution to the research in the Department".	Oxford University, Department of Materials.
1997	University Fellowship Award for research into nanocomposite.	Beijing University of Science and Technology, China.
1996	<i>National Prize for Advancement in Science and Technology</i> for the application of MMC in aerospace.	The Ministry of Aerospace, China

(6) International Recognition

- Visiting Professor of Harbin Institute of Technology (HIT), China. (2011-). Strict selection process based on publications, independent citations as well as total published journal impact factor.
- International PhD examination:
 - National University of Singapore (NUS), Singapore (2011),
 - National Institute of Technology (NIT), India (2011),
 - State Research Institute, Lithuania (2011).
 - Harbin Institute of Technology, China (2010, 2011).
 - Visveswaraiah Technological University, India (2006).
- Keynote and Invited speaker (*selected*):
 - Keynote: 1st China International Conference on Composites (CCCM-1) Beijing, Sept. 2013.
 - Keynote: International Conference on Nanoscaled Magnetism and Applications (DICNMA), Spain, 2013.
 - Plenary speaker and Chair/co-chair for session at Mech Aero-2013.
 - Invited: 6th Asia-EU symposium on advanced polymer composites (AESP6), WuHan, June, 2013.
 - Invited speaker 30th Progress in Electromagnetics Research Symposium (PIERS), Suzhou, 2011.
 - Keynote Speaker: International Workshop on Magnetic Microwires (IWMW), Bodrum, Turkey, 2010.
 - Invited speaker: 19th Int. Conf. Composites /Nano Engineering (ICCE19), Shanghai, 2011.
 - Invited and Supported Speaker: 3rd Computational Nanotechnology (CoNan), Gdansk, Poland, 2010.
 - Keynote Speaker (invited and supported): 5th International Conference on Functional Nanostructure Materials (FNMA08), Ukraine, August, 2008
- Organising international conferences:
 - 19th International Conference on Composite Materials (ICCM-19), Montreal, 2013
 - 7th Bio-nanotechnology symposium, NSQI, Bristol, UK, Nov. 2013.
 - International Conference on Nanoscaled Magnetism and Applications (DICNMA), Spain, 2013
 - 2nd International Conference on Advanced Polymer Matrix Composites (Compo2012), Harbin, China.
 - 3rd International Conference on Smart Materials and Nanotechnology, 2011.
 - Organizing the 1st UK-China Steel Research Forum, Leicester, UK, July 2010.
 - 17th International Conference on Composite Materials (ICCM-17), Edinburgh, UK. 2009.
 - 2nd International Conference on Smart Materials and Nanotechnology, 2009.
- Invited and supported visits to centers of excellence:
 - The State Key Lab for MMC (SKLMMC), Shanghai Jiaotong Uni., China, 2010.
 - W.M. Keck Laboratory, University of North Carolina at Chapel Hill, 2010.
 - Invited and supported visit to the Advanced Ceramic Composites Centre, NUDT, China, 2009.
 - Invited and supported visit to the National Institute of Material Science (NIMS), Japan, July 2008.
 - Invited to be an overseas experts by Beihang University (China) under the National 'Plan 111' aims to attract overseas talents from the top 100 universities/institutes in the world. (2007-).
 - Among a team of 5 academics in the South West of England, invited and supported by SWRDA for the UK Trade & Investment Aerospace Mission to the Japan Aerospace Exploration Agency (JAXA) to speak at the Joint Seminar on Advanced Composites for Aerospace Applications, Tokyo, Japan (10/2006).
 - Visiting scientist to the Harbin Institute of Technology (China) for research exchange (2007-2011).
- Other:
 - Visit from JAXA, Dr Ogasawara (Leader of the Composites Centre in JAXA) specifically requested to meet to discuss the nanocomposite research (2007).
 - Book chapter on Multifunctional Polymer Nanocomposites, Taylor and Francis, LLC, 2010.
 - International research proposal reviewer for UNIVERSITÉ DU LUXEMBOURG (2006).
 - Session Chair: SPIE conference on Smart Structures and materials, San Diego, CA, March 2011.
 - Session Chair, 15th International Conference on Composite Engineering ICCE15, ICCE10/9.
 - Paper in the peer-reviewed international Journal of Materials Science and Technology (2005).
- Invitations to be editorial board member (*invitation declined*):
 - *Materials Sciences and Applications*, published by the Scientific Research Publishing, USA (2010)
 - *Journal of Aeronautics & Aerospace Engineering*, OMICS Publishing Group, USA (2012).

At national level:

- External PhD Examiner for Universities: Portsmouth, Cranfield, Nottingham, Loughborough, Exeter, Brunel, Durham, Sheffield.
- Chair of the Nanocomposites for Aerospace workshop, NSQI,, Bristol, Feb. 2013.
- Invited external speaker: Uni of Oxford, Imperial, Exeter, Leicester, Loughborough, Swansea, Plymouth.
- **Keynote** Speaker at HiPerNano 'High Performance Nano-enhanced Materials for Extreme Environments, London, NanoKTN. (2008)
- **Keynote** speaker at the Bristol Enterprise Network (BEN) – Nanomaterials event, Bristol (2007); Invited lecture at The Annual Bristol Colloid Centre Awareness Forum, Bristol (2006); Invited talk at the Materials Congress London (2004).
- Invited exhibition at the Royal Academy of Engineering Soiree and Exhibition, *Engineering the composite materials of tomorrow's aero-engines*, 26 June 2002, Oxford, UK.

External research collaborations:International:

- Prof. Brosseau, **Benjamin Meaker VISITING PROFESSOR**, University de Bretagne (France) – Magnetic composites (Joint paper in APL).
- Prof. Nickelson, State Research Institute, (Lithuania) – meta-materials.
- Dr. Liu, National University of Singapore, (Singapore) - microwave composites.
- Prof. Srikanth, University of South Florida (USA) – Magnetic nanocomposites.
- Dr. Povov, Taurida National University (Ukraine) – Electromagnetic composites (joint papers)
- Prof. Lu-Chang Qin, University of North Carolina (USA) – 1D nanomaterials. (joint paper)
- Prof. Chiriac, National Institute of Technical Physics (Romania) – Magnetic wires.
- Prof. Vazquez, Instituto de Ciencia de Materiales (Spain) – magnetic GMI materials (joint papers).
- Prof. Jan Gou, University of Central Florida (USA) – Carbon nanotube thin films.
- Prof. Chau, National University of Hanoi (Vietnam) – GMI sensing materials (joint papers).
- Prof. Yu, Chungbuk National University (South Korea) – GMI sensing materials (joint papers).
- Prof. Karaman, Texas A&M University, (USA) – magnetic shape memory alloys.
- Prof. Geng, Harbin Institute of Technology, (China) – metal matrix composites (joint papers).
- Prof. Gao, Beijing General Research Institute for Non-Ferrous Metals (China) – preparation of metallic nanoparticles and their composites.
- Prof. Cui, Key Lab for Advanced Composites, BIAM (China) – high volume fractions of ceramic composites (joint papers).

National:

- Prof. Grant, Oxford Materials, Oxford University – Novel actuating materials (joint papers).
- Dr. Meydan of the Wolfson Centre for Magnetic Technology, Cardiff University – GMI materials.
- Prof. Evans, University College of London – novel ceramic lattice structures (joint papers).
- Profs. Zhu and Smith, Exeter University – nanocomposites.
- Profs. Friwsell and Adhikira, Swansea University – composites (Joint papers)
- Dr. Yang, Queen Mary, University of London – ceramic lattices.
- Prof. Dunne, Oxford University – Ti matrix composites (joint papers).
- Prof. Fan, Brunel University – Squeeze casting metal matrix composites (joint papers).
- Prof. Panina, Plymouth University – GMI materials and smart composites.
- Drs. Mo, Wu, Loughborough University – polymer nanocomposites.
- Dr. Smiths, Exeter University – novel cellular materials.
- Dr. Roebuck at the National Physical Laboratory (NPL) – materials testing.

Cross-Faculty/Department:

- Dr. Su, Oral and Dental Science, Faculty of Medicine and Dentistry – Bi-continuous composites
- Prof. Schwarzacher, Physics Department, Science Faculty – magnetic characterizations.
- Prof. Mann, Dr. May, Dr. Davis, Dr. Li and Dr. Van Duijneveldt, School of Chemistry – nanoparticles and polymer nanocomposites.

- Prof. Mellor, Electrical and Electronics Eng. Faculty of Eng. – self-monitoring composite.
- Prof. David Smith, Mechanical, Nuclear Materials.

(7) TEACHING and related administration

Consistently delivering Materials lectures and labs to 1st, 2nd and/or 4th year undergraduates with a typical class size of 65~90 within Aerospace Department. Promoting a new approach to the teaching of materials to Engineering students under the philosophy that Engineers *make* and *manage* things, they make them out of *materials*, i.e., a design-driven approach instead of a science-driven approach; promoting the use of the computer-based tools CES EduPack across the Faculty with extremely positive feedbacks. Such software also provides exportable skills: students gain an insight into professional-level engineering tools (see article in **The Brief**, March 2007).

Specific achievement and activities are:

- Received the *University Learning and Teaching Award* for implementing the CES EduPack into undergraduates teaching; currently leading this activity across three Departments.
- Unit Director of the ACCIS DTC unit: Nanocomposites and Nanoengineering.
- Received TSU/Faculty fund for implement CES EduPack across the Faculty (2006/7).
- For 5 years, being Department Examination Officer (2006~2010) and the 2nd Year Tutor (2006-2011).
- Responsible for setting 2nd year lab timetable and the 1st and 2nd year Materials testing labs.
- Actively participating in CPDA course: *Introductions to Aeronautics* (2005-present)
- News Article: *Teaching Materials and manufacturing Processes*, *The Brief*, (2007).

(i) Undergraduate units: **Structures and Materials 1A, 2A & 4A, Materials 1.**

Unit codes: AENG 11200, AENG 21200 and AENG M1200 , AENG 11201

Level of responsibility:

Unit director of *Materials 1* (AENG 11201); coordinating the Materials lectures within the Structures and Materials 1&2; assisting the unit-director in managing the courses and modules. Setting 2nd year lab timetable, processing examination and course work marks etc.

Date	Year Group	Student Number	Nature of teaching	Contact hours	Teaching method	Assessment method
2009~	1 st	115	Lectures	Lecture-15	Video clips, overheads	Essay, in-class test, exam
	2 nd	65	Lecture &	Lecture-15	PowerPoint	Essay, in-class test, lab report, exam
2008/2009	1 st	65	Lecture &	Lecture-15 Lab-16	Video clips, overheads	Essay, in-class test, exam
	2 nd	65	Lecture &	Lecture-15	PowerPoint	Essay, in-class test, lab report, exam
2007/2008	1 st	65	Lecture & Labs*	Lecture-15 Lab-16	Video, overheads	Essay, in-class test, exam
	2 nd	65	Lecture & Labs**	Lecture-15 Lab-24 +30#	PowerPoint	Essay, in-class test, lab report, exam

*1st year Laboratory Work--Mechanical Testing of Materials

**2nd year Laboratory Work-- Microstructure and Mechanical Property of Metallic Alloys.

2nd year lab involves a lab report and the marking of these reports normally take 25~30 hours.

(ii) Major teaching responsibilities in previous years:

- 2002~2007: Department of Aerospace Eng., Bristol University. Delivering Materials courses and labs to 1st, 2nd and/or 4th year undergraduates.

(iii) Innovative units or teaching methods introduced:

- Develop and coordinate the NanoEngineering unit to ACCIS Doctoral Training Centre (DTC, 2009-).
- Development of NEW lectures on Smart materials & Nanostructured Materials with links to current research in Structures and Materials 4A (2003/4).
- Implementing the CES EduPack within the department and across the Faculty. Received the *University Learning and Teaching Award* (2005) and the TSU/Faculty fund (2006) for implement CES EduPack across the Faculty.

(vi) Contribution to Continuing Education and CPD courses:

- 2005 ~ present: Involved in Continuous Professional Development in Aerospace (CPDA): *Introductions to Aeronautics*. One-week course typically for 12 industrial Engineers, with 3 hours lectures and 2 hours lab.

(v) Collaborative teaching projects with colleagues in other departments:

- Leading a team with Dr. Matthew Peel and Dr. Paul Harper to implement the CES EduPack teaching software across the Queens School of Engineering including Eng. Design (2010-).

(vi) Postgraduate advising (* - completed since Readership)

	Student Name	Advisory	Starting Date	Stages
1.	M-H Phan, PhD	Principal Supervisor (PS) (with Prof. Wisnom)	1/10/2003	PhD completed (14/8/2006)
2.	L. Yin, PhD	Single Supervisor	1/10/2005	PhD completed (28/04/2009)
3. *	W.M. Zhao, PhD	Single Supervisor	1/10/2006	PhD completed (5/07/2010)
4. *	F. Qin, PhD	Single Supervisor	1/10/2007	PhD completed (13/10/2010) <i>Shortlist for Best PhD thesis award</i>
5. *	Y. Liu, MSc	Single Supervisor	29/9/2008	MSc completed (12/11/2010)
6. *	A.P. Limmack, PhD	Single Supervisor	1/11/2004	PhD completed (20/01/2011)
7. *	M. Walls-Bruck, PhD	PS (with Dr. Bond)	1/08/2007	Passed PhD Viva (2/11/2011)
8. *	Xiang MA, IASD MSc	PS (with Prof. Scarpa)	1/10/2010	MSc completed (18/10/2011)
9. *	L. Dong (visiting PhD student)	Co- Supervisor (with Prof. Han of Jilin University, China)	4/10/2008	PhD completed (Sept 2010)
10. *	L. Huang (visiting PhD student)	Co- Supervisor (with Prof. Geng of HIT, China)	1/09/2009	PhD completed (Oct. 2010)
11. *	HJ YU (visiting PhD student)	Co- Supervisor (with Prof. Zhou of NUDT, China)	1/02/2010	PhD completed (July. 2011)
12.	D.R. Payne, PhD	PS (with Prof. Shaw of DSTL and Prof. Jones of Leeds)	1/10/2007	3rd year (P/T)
13.	Y. Luo, PhD	PS	1/10/2012	1 st year
14.	J. X. Zhang	PS	1/04/2013	1 st year
15.	M. Russ, PhD	PS	4/02/2008	PhD completed (11/2012)
16.	C. Moore, MSc	PS (with Mr Harvey of Westland)	1/06/2007	MSc completed (14/03/2013 P/T)

17.	XP Cui (visiting PhD student)	Co- Supervisor (with Prof. Geng of HIT, China)	1510/2010	PhD completed (06/2012)
18.	H. Wang (visiting PhD student)	Co- Supervisor (with Prof. Sun of HIT, China)	04/01/2012	PhD completed (7/2012)
19.	JW Zhang(visiting PhD student)	Co- Supervisor (with Prof. Jiang of NUDT, China)	12/10/2011	3 rd Year
<i>before joining Bristol:</i>				
20.	Z. Zhou (PhD)	technical supervising	March 1998, Brunel University.	PhD awarded
21.	D. Mudhler (MPhil)	technical supervising	Jan. 1998, Brunel University	MSc awarded
22.	W.L. Zhang (PhD)	technical supervising	March 1996 Harbin Inst. Tech.	PhD awarded
23.	Z. Xu (MSc)	technical supervising	Sept. 1996 Harbin Inst. Tech.	MSc awarded

(vii) Major achievements in teaching administration

- **Queens School Deputy Director of Study (DoS) for PGR (08/2011~)**
 - Responsible for PG recruitments in Aero. (ACCIS and Applied Mechanics);
 - Acting on behalf of Head of Department to approve and sign off PGR annual review;
 - Assessing examiner final reports and approval.
- **Department Examination Officer (2006 ~2010):**
 - Responsible for exam processes and liaising with external examiners for exam papers evaluations;
 - Reporting to the Dept Exam Board and meeting with externals for all exam-related matters;
 - Dealing with students appeals during the summer exam and the supplementary exam.
- Member of the Teaching Committee, Special Circumstances Committee, Faculty Advisory Board and Faculty Exam Board (representing the department and its students).
- **2nd Year Tutor (2006 ~2011)**
 - Arranging year forum; gathering feedback from student representatives; handling student-complaints, confidential student-data.
 - Processing examination and course work marks; coordinating and guiding the students to select optional courses; providing references for student applications for employments.
- 2006~present: manning the stands at the open days.
- **Faculty promotion committee member.(2012-)**

(8) Publications

Book (contract signed)

F. Qin, M.H. Phan and **H. X. Peng**, *Ferromagnetic Wires and their Multifunctional Composites: from Sensors to Microwave Applications*, Springer.

Book Chapters

[1]. **H. X. Peng**, *Polyurethane Nanocomposite Coatings for Aeronautical Applications* in **Multifunctional Polymer Nanocomposites**, Taylor and Francis, LLC, 2010, pp.337-387. (51 pages)

[2]. F.Qin, **H.X. Peng**. MAGNETOCALORIC EFFECT OF AMORPHOUS MATERIALS BASED ON HEAVY RARE EARTH ELEMENTS, Nova Science, 2013.

Invited Editorial

1. Qin, F.X., Peng, H-X.
Ferromagnetic microwire metacomposites provide multifunctionality, *The Brief*,
<http://the-briefing.com/ferromagnetic-microwire-metacomposites-provide-multifunctionality>, [Click here](#)
2. **Weight Watchers: UK team pinpoints technique to produce jet engine parts that are 70 per cent lighter**, *The Engineer*,
<http://www.theengineer.co.uk/news/weight-watchers/279793.article>, [Click here](#)

Journal Papers (refereed)

2014

1. F. X. Qin, J. Tang, V. V. Popov, J. S. Liu, H-X. Peng, and C. Brosseau. Influence of direct bias current on the electromagnetic properties of melt-extracted microwires and their composites, **Applied Physics Letters**, 2014, 104, 012901 [PDF](#)
2. Jianwei Zhang, Dazhi Jiang, H-X. Peng. A pressurized filtration technique for fabricating carbon nanotube buckypaper: Structure, mechanical and conductive properties, **Microporous and Mesoporous Materials**, 2014; 184, 127-133. DOI: 10.1016/j.micromeso.2013.10.012 [PDF](#)
3. Jianwei Zhang, Cai Jiang, Dazhi Jiang, H-X. Peng. Nano-engineering thermal transport performance of carbon nanotube network with polymer intercalation: A molecular dynamics study, **Physical Chemistry Chemical Physics**, 2014; DOI:10.1039/C3CP53714E [PDF](#)

2013

4. F-X Qin and H-X Peng. Ferromagnetic microwires enabled multifunctional composite materials. **Progress in Materials Science**, 2013;58:183-259. [PDF](#)
5. Y. Luo, H-X Peng, F.X.Qin, M. Ipatov, V.Zhukova, A.Zhukov, J. Gonzalez. Fe-based ferromagnetic microwires enabled meta-composites, **Applied Physics Letters**, 2013;103, 251902; DOI: 10.1063/1.4850196 [PDF](#)

6. F. X. Qin, N. S. Bingham, H. Wang, H. X. Peng, J. F. Sun, V. Franco, S. C. Yu, H. Srikanth, and M. H. Phan 'Mechanical and magnetocaloric properties of Gd-based amorphous microwires fabricated by melt-extraction', *Acta Materialia*, 2013;61(4):1284-1293. [PDF](#)
7. Jianwei Zhang, Dazhi Jiang, H.X. Peng, F.X. Qin. 'Enhanced mechanical and electrical properties of carbon nanotube buckypaper by in situ cross-linking', *Carbon*, 2013, doi.org/10.1016/j.carbon.2013.06.047 [PDF](#)
8. F. X. Qin, Y. Quere, C. Brosseau, H. Wang, J. S. Liu, J. F. Sun, and H. X. Peng. Two-peak feature of the permittivity spectra of ferromagnetic microwire/rubber composites, *Applied Physics Letter*, 2013;102, 1229031-4. [PDF](#)
9. Xiaoya Dai, Wenlong Zhang, Ping Gao, Shaozong Zhang, Mingyuan Gu, Hua-Xin Peng. Pretension-Dependent Residual Stress of Alumina Fiber-Reinforced Composite Wire. *Metallurgical and Materials Transactions A*, 2013;44. [PDF](#)
10. Kai Yu, Yanju Liu, Yong Liu, Hua-Xin Peng and Jinsong Leng, Mechanical and shape recovery properties of shape memory polymer composite embedded with cup-stacked carbon nanotubes, *Journal of Intelligent Material Systems and Structures* 2013 DOI: 10.1177/1045389X13504475, [PDF](#)
11. F. X. Qin, Z. Chen, G. Hilton, H. X. Peng. Microwave absorption of structural polymer composites containing glasscoated amorphous microwires, *IEEE Transactions on Magnetics*, 2013, 49, 4245-4248, [PDF](#)
12. Wangchang Li, Xiaoqing Qiao, Mingyu Li, Ting Liu, H.X. Peng. 'La and Co substituted M-type barium ferrites processed by sol-gel combustion synthesis', *Materials Research Bulletin*, 2013,48; 4449-4453, doi: 10.1016/j.materresbull.2013.07.044 [PDF](#)
13. Wangchang Li, Xiaoqing Qiao, Yang Luo, F.X. Qin, H.X. Peng. Magnetic medium broadband metamaterial absorber based on the coupling resonance mechanism, *Applied Physics A*, 2013; DOI: 10.1007/s00339-013-7996-5, [PDF](#)
14. L.J. Huang, S. Wang, L. Geng, B. Kaveendran, H.X. Peng. 'Low volume fraction in situ (Ti₅Si₃+Ti₂C)/Ti hybrid composites with network microstructure fabricated by reaction hot pressing of Ti-SiC system', *Composites Science and Technology*, 2013, 82, 23-28. [PDF](#)

15. L.J. Huang, L. Geng, Y. Fu, B. Kaveendran, H.X. Peng. 'Oxidation behavior of in situ TiCp/Ti6Al4V composite with self-assembled network microstructure fabricated by reaction hot press', **Corrosion Science**, 2013, 69, 175-180. [PDF](#)
16. M. Russ, S.S. Rahatekar, K.K. Koziol, B. Farmer, H.X. Peng. 'Length-dependent electrical and thermal properties of carbon nanotube-loaded epoxy nanocomposites', **Composites Science and Technology**, 2013, 81, 42-47. [PDF](#)
17. Jianwei Zhang, Dazhi Jiang, H.X. Peng. 'Two-stage mechanical percolation in the epoxy resin intercalated buckypaper with high mechanical performance', **RSC Advances**, 2013, DOI: 10.1039/c3ra42065e [PDF](#)
18. Jianwei Zhang, Dazhi Jiang, Fabrizio Scarpa, Hua-Xin Peng. 'Enhancement of pullout energy in a single-walled carbon nanotube-polyethylene composite system via auxetic effect', **Composites: Part A**, 2013, 55, 188-194. [PDF](#)
19. B. Kaveendran, G. S. Wang, L.J. Huang, L. Geng, H.X. Peng. 'In situ (Al₃Zr + Al₂O₃np)/2024Al metal matrix composite with novel reinforcement distributions', **Journal of Alloys and Compounds**, 2013, 581, 16-22. [PDF](#)
20. Jianwei Zhang, Su Ju, Dazhi Jiang, H.X. Peng. 'Reducing dispersity of mechanical properties of carbon fiber/epoxy composites by introducing multi-walled carbon nanotubes', **Composites Part B**, 2013, 54, 371-376. [PDF](#)
21. F. X. Qin, C. Brosseau, and H. X. Peng. Microwave properties of carbon nanotube/microwire/rubber multiscale hybrid composites, **Chemical Physics Letter**, 2013; doi.org/10.1016/j.cplett.2013.06.021, [PDF](#)
22. F. X. Qin, H. X. Peng, Z. Chen, H. Wang, J.W. Zhang and G. Hilton. Optimization of microwire/glass-fibre reinforced polymer composites for wind turbine application, **Applied Physics A**, 2013; DOI 10.1007/s00339-013-7820-2, [PDF](#)
23. B. Kaveendran, G. S. Wang, L.J. Huang, L. Geng, H.X. Peng. '(Al₃Zr+Al₂O₃np)/2024Al metal matrix composite with controlled reinforcement architecture fabricated by reaction hot pressing', **Materials Science & Engineering**, 2013, A583(2013)89-95. [PDF](#)
24. H. Wang, F.X. Qin, D.W. Xing, F. Cao, H. X. Peng, J.F. Sun. Fabrication and characterization of nano/amorphous dual-phase FINEMET microwires, **Materials Science and Engineering B**, 2013, 178: 1483– 1490. [PDF](#)

2012

25. H.Wang, F.X.Qin, D.W. Xing, F. Cao,, H. X. Peng, J.F.Sun. Relating residual stress and microstructure to mechanical and GMI properties in cold-drawn Co-based amorphous microwires.
Acta Materialia, 2012;60:5425-5436. [PDF](#)
26. N. S. Bingham, H. Wang, F. Qin, H. X. Peng, J. F. Sun, V. Franco,H. Srikanth, and M. H. Phan. Excellent magnetocaloric properties of melt-extracted Gd-based amorphous microwires,
Applied Physics Letters, 2012, 100, 046101 [PDF](#)
27. F. X. Qin, C. Brosseau, J. Fuller, H.X. Peng. Magnetic field-dependent effective microwave properties of microwire/epoxy composites.
Applied Physics Letters, 2012, 101, 152905 [PDF](#)
28. F.X. Qin, C. Brosseau, H-X. Peng, H. Wang, J. Sun. 'In situ microwave characterization of microwire composites with external magnetic field',
Applied Physics Letters , 2012, 100: pp. 192903-1-192903-4 10.1063/1.4712126 [PDF](#)
29. J.S. Liu, J.F. Sun, D.W. Xing, X. Xue, L. Y. Zhang, F. X. Qin, H. X. Peng. Enhancing GMI properties of melt-extracted Co-based amorphous wires by twin-zone Joule annealing.
Journal of Alloys and Compounds 10.1016/j.jallcom.2012.05.126 [PDF](#)
30. Cui, X.P., Fan, G.H.,, Geng, L., Huang, L, Wang, Y. & Peng, H-X. 'Growth kinetics of TiAl₃ layer in multi-laminated Ti-(TiB₂/Al) composite sheets during annealing treatment', *Materials Science and Engineering A*, **539**, (pp. 337-343), 2012. [PDF](#)
31. Cui, XP, Fan, GH, Geng, L, Wang, Y & Peng, H-X. 'Fabrication of fully dense TiAl-based composite sheets with a novel microlaminated microstructure',
Scripta Materialia, **66**, (pp. 276-279), 2012. 10.1016/j.scriptamat.2011.11.009 [PDF](#)
32. Huang, L, Geng, L., Peng, H-X & Kaveendran,B. 'High temperature tensile properties of in situ TiBw/Ti₆Al₄V composites with a novel network reinforcement architecture', *Materials Science and Engineering: A*, **534**, (pp. 688-692), 2012.10.1016/j.msea.2011.12.028 [PDF](#)
33. Qin, F, Peng, H-X, M.H. Phan, L. Panina, M. Ipatov & A. Zhukov. 'Effects of wire properties on the field-tunable behaviour of continuous-microwire composites', *Sensors and Actuators*, **178**, (pp. 118-125), 2012. [PDF](#)
34. Wang, H., Xing, D.W., Peng, H-X, Qin, F, Cao F.Y. & Wang, G., Sun J.F.. 'Nanocrystallization enabled tensile ductility of Co-based amorphous microwires', *Scripta Materialia*, **66**, (pp. 1041-1044), 2012. 10.1016/j.scriptamat.2012.02.020 [PDF](#)
35. Zhao, Y.W, Wang, Y.J. , Peng, H-X & Zhou, Y.. 'Dense sub-micron-sized ZrC-W composite produced by reactive melt infiltration', *Journal of Refractory Metals and Hard Materials*, **30**, (pp. 196-199), 2012. 10.1016/j.jirmhm.2011.08.009 [PDF](#)

2011

36. Qin, F, Brosseau C, & Peng, H-X. 'In situ microwave characterization of microwire composites under mechanical stress', *Applied Physics Letters*, **99**, (pp. 252902-1-252902-4), 2011. 10.1063/1.3668109 [PDF](#)
37. Huang, L.J, Geng, L, Peng, H-X & Zhang, J. 'Room temperature tensile fracture characteristics of in situ TiBw/Ti6Al4V composites with a quasi-continuous network architecture', *Scripta Materialia*, **64 (9)**, (pp. 844-847), 2011. 10.1016/j.scriptamat.2011.01.011 [PDF](#)
38. Huang, L.J, Geng, L, Peng, H-X, Balasubramaniam, K & Wang, G.S. 'Effects of sintering parameters on the microstructure and tensile properties of in situ TiBw/Ti6Al4V composites with a novel network architecture', *Materials & Design*, **32 (6)**, (pp. 3347-3353), 2011. 10.1016/j.matdes.2011.02.023 [PDF](#)
39. Huang, L.J, Geng, L, Xu, H.Y & Peng, H-X. 'In situ TiC particles reinforced Ti6Al4V matrix composite with a network reinforcement architecture', *Materials Science and Engineering*, **528 (6)**, (pp. 2859-2862), 2011.10.1016/j.msea.2010.12.046 [PDF](#)
40. Qin, F, Peng, H-X, Panina L. V. & et al.. 'Smart Composites With Short Ferromagnetic Microwires for Microwave Applications', *IEEE TRANSACTIONS ON MAGNETICS*, **VOL. 47, NO. 10**, (pp. 4481-4484), 2011. 10.1109/TMAG.2011.2157663 [PDF](#)
41. Qin, F, Peng, H-X, Popov, V, V & Panina, L.V. Ipatov M, Zhukova, V, Zhukov, A, Gonzalez, J.. 'Stress tunable properties of ferromagnetic microwires and their multifunctional composites', *J. Appl. Phys*, **109, 07A310**, (pp. 1-3), 2011.10.1063/1.3535553 [PDF](#)
42. Qin, F, Popov, V.V. & Peng, H-X. 'Stress tunable microwave absorption of ferromagnetic microwires for sensing applications', *Journal of Alloys and Compounds*, **509**, (pp. 9508-9512), 2011. 10.1016/j.jallcom.2011.07.051 [PDF](#)
43. Wang, Y, Peng, H-X, Zhou, Y & Song, G.M. 'Influence of ZrC content on the elevated temperature tensile properties of ZrCp/W composites', *Materials Science and Engineering*, **528 (3)**, (pp. 1805-1811), 2011. 10.1016/j.msea.2010.11.029 [PDF](#)
44. Yu, H.J, Zhou, X.G, Zhang, W, Peng, H-X, Zhang, C & Sun, K. 'Properties of carbon nano-tubes-Cf/SiC composite by precursor infiltration and pyrolysis process', *Materials & Design*, **32 (6)**, (pp. 3516-3520), 2011. 10.1016/j.matdes.2011.02.038 [PDF](#)
45. Yu, H.J, Zhou, X.G, Zhang, W, Peng, H-X, Zhang, C.R & Huang, Z.L. 'Mechanical properties of 3D KD-I SiCf/SiC composites with engineered fibre-matrix interfaces', *Composites Science and Technology*, **71 (5)**, (pp. 699-704), 2011.10.1016/j.compscitech.2011.01.014 [PDF](#)
46. Zhang S.L. , Sun, J.F. , Xing D.W., Qin, F & Peng, H-X. 'Large GMI effect in Co-rich amorphous wire by tensile stress', *Journal of Magnetism and Magnetic Materials*, **323**, (pp. 3018-3021), 2011. 10.1016/j.jmmm.2011.06.041 [PDF](#)
47. Zhao, YW, Wang, Y-J, Zhou, Y, Peng, H-X & Song, G-M. 'Ternary Phase ZrxCuyCz in Reactively Infiltrated ZrC/W Composite', *Journal of the American Ceramic Society*, (pp. 1-5), 2011. 10.1111/j.1551-2916.2011.04742.x [PDF](#)

48. Wang, Y-J, Peng, H-X, Ye, F & Zhou, Y. 'Effect of TiB₂ content on microstructure and mechanical properties of in-situ fabricated TiB₂/B₄C composites', *Transactions of Nonferrous Metals Society of China*, 21, (pp. s369-373), 2011. DOI: 10.1016/S1003-6326(11)61608-710.1016/S1003-6326(11)61608-7 [PDF](#)

49. J.S. Liu, X.D. Wang, F.X. Qin, D.W. Xing, F.Y. Cao, H.X. Peng, X. Xiang and J.F. Sun. GMI Output stability of Glass-coated Co-based microwires for sensor application, *PIERS Online*, 7(7):661-665, 2011. [PDF](#)

2010

50. Huang, LJ, Geng, L & Peng, H-X. 'In-situ (TiB_w+TiCp)/Ti6Al4V composites with a novel network architecture', *Materials Science and Engineering*, **A527**, (pp. 6723-6727), 2010. 10.1016/j.msea.2010.07.025 [PDF](#)

51. Li, Y, W, Zhao, G, S, Wang, J, C, Sun, X, W & Peng, H-X. 'Visual Reconstruction and Feature Analysis of the Three-Dimensional Surface of Earthworm', *Advances in Natural Science*, **3 (2)**, (pp. 39-47), 2010. [PDF](#)

52. Qin, F & Peng, H-X. 'Macro-composites containing ferromagnetic microwires for structural health monitoring', *Nano Communication Networks*, **1**, (pp. 126-130), 2010. 10.1016/j.nancom.2010.08.001 [PDF](#)

53. Qin, F, Pankratov, N, Peng, H-X, Phan, MH, Panina, LV, Ipatov, M, Zhukova, V, Zhukov, A & Gonzalez, J. 'Novel magnetic microwires-embedded composites for structural health monitoring applications', *Journal of Applied Physics*, **107 (9)**, (pp. 09A314-1-3), 2010. 10.1063/1.3350897 [PDF](#)

54. Qin, F, Peng, H-X & C. Prunier, and C. Brosseau . 'Mechanical-electromagnetic coupling of microwire polymer composites at microwave frequencies', *Appl. Phys. Lett*, **97**, (pp. 153502-1-3), 2010. 10.1063/1.3502488 [PDF](#)

55. Qin, F, Peng, H-X & Phan, M.H. 'Wire length effect on GMI in Co_{70.3}Fe_{3.7}B₁₀Si₁₃Cr₃ amorphous class-coated microwires', *Materials Science and Engineering B*, **167 (2)**, (pp. 129-132), 2010. 10.1016/j.mseb.2010.01.039 [PDF](#)

56. Qin, F, Peng, H-X, Pankratov, N, Phan, MH, Panina, LV, Ipatov, M, Zhukova, V, Zhukov, A & Gonzalez, J. 'Exceptional electromagnetic interference shielding properties of ferromagnetic microwires enabled polymer composites', *Journal of Applied Physics*, **108**, (pp. 044510-1-6), 2010. 10.1063/1.3471816 [PDF](#)

57. Qin, F, Peng, H-X, Tang, J & Qin, L. 'Ferromagnetic microwires enabled polymer composites for sensing applications', *Composites Part A: Applied Science and Manufacturing*, **41**, (pp. 1823-1828), 2010. 10.1016/j.compositesa.2010.09.003 [PDF](#)

58. Qin, FX, Peng, H-X & Phan, MH. 'Influence of varying metal-to-glass ratio on GMI effect in Co_{70.3}Fe₇B₁₀Si₁₃Cr₃ amorphous glass-coated microwires', *Solid State Communications*, **150 (1-2)**, (pp. 114-117), 2010. ISSN: 0038-109810.1016/ssc.2009.09.038 [PDF](#)

59. Scarpa, FL, L. Boldrin, Peng, H-X, Remillat, CDL & Adhikari, S. 'Coupled thermomechanics of single-wall carbon nanotubes', *Applied Physics Letters*, **97**, (pp. 151903-), 2010. 10.1063/1.3499748 [PDF](#)
60. Zhao, W, Li, M & Peng, H-X. 'Functionalized multiwalled carbon nanotubes doped thermoplastic polyurethane nanocomposites for aerospace coating applications', *Macromolecular Materials & Engineering*, **295**, (pp. 838-845), 2010.10.1002/mame.201000080 [PDF](#)
61. Zhao, W, Li, Mei, Zhang, Z & Peng, H-X. 'EMI shielding effectiveness of silver nanoparticles decorated multiwall carbon nanotube sheets', *International Journal of Smart and Nano Materials*, **3**, (pp. 1-12), 2010. 10.1080/19475411.2010.511477 [PDF](#)

2009

62. Huang, LJ, Geng, L, Li, AB, Yang, FY & Peng, H-X. 'In situ TiBw/Ti-6Al-4V composites with novel reinforcement architecture fabricated by reaction hot pressing', *Scripta Materiala*, **60**, (pp. 996-999), 2009. 10.1016/j.scriptamat.2009.02.032 [PDF](#)
63. Peng, H-X, Qin, F, Phan, MH, Tang, J, Panina, LV, Ipatov, M, Zhukova, V, Zhukov, A & Gonzalez, J. 'Co-based magnetic microwire and field-tunable multifunctional macro-composites', *Journal of Non-Crystalline Solids*, **355 (24-27)**, (pp. 1380-1386), 2009. 10.1016/j.jnoncrysol.2009.05.040 [PDF](#)
64. Yin, L, Peng, H-X, Dhara, S, Yang, L & Su, B. 'Natural additives in protein coagulation casting process for improved microstructural controllability of cellular ceramics', *Composites Part B*, **40 (7)**, (pp. 638-644), 2009.10.1016/j.compositesb.2009.04.016 [PDF](#)

2008

65. Phan, MH & Peng, H-X. 'Giant magnetoimpedance materials: Fundamentals and Applications', *Progress in Materials Science*, **53**, (pp. 323-420), 2008. ISSN: 0079-6425 10.1016/j.pmatsci.2007.05.003 [PDF](#)
66. Tung, MT, Dung, NV, Nghi, NH, Phan, MH & Peng, H-X. 'Influence of Fe doping and FeNi-layer thickness on the magnetic properties and GMI effect of electrodeposited Ni_{100-x}Fe_x/Cu (x = 0-95) wires', *Journal of Physics D: Applied Physics*, **41 (10, 105003)**, (pp. 1-6), 2008. ISSN: 0022-3727 10.1088/0022-3727/41/10/105003 [PDF](#)
67. Yin, L, Peng, H-X, Dhara, S, Yang, L & Su, B. 'Improvement of microstructural controllability of cellular ceramic for multifunctional composites', *Advanced Materials Research*, **47-50**, (pp. 944-947), 2008. <http://www.scientific.net/0-87849-378-6/23.html> [PDF](#)
68. Yin, L, Peng, H-X, Yang, L & Su, B. 'Fabrication of three-dimensional inter-connective porous ceramics via ceramic green machining and bonding', *Journal of the European Ceramic Society*, **28**, (pp. 531-537), 2008. ISSN: 0955-2219 10.1016/j.eurceramsoc.2007.07.006 [PDF](#)

2007

69. Phan, MH, Peng, H-X, Seong-Cho Yu, Nguyen Duc Tho, Hoang Nam Nhat & Nguyen Chau. 'Manganese perovskites for room temperature magnetic refrigeration applications', *Journal of Magnetism and Magnetic Materials*, **316**, (pp. 562-565), 2007. ISSN: 0304-8853 10.1016/j.jmmm.2007.03.021 [PDF](#)
70. Phan, MH, Peng, H-X, Tung, MT, Dung, NV & Nghi, NH. 'Optimized GMI Effect in Electrodeposited CoP/Cu Composite Wires', *Journal of Magnetism and Magnetic Materials*, **316**, (pp. 244-247), 2007. ISSN: 0304-8853 10.1016/j.jmmm.2007.02.111 [PDF](#)
71. Phan, MH, Peng, H-X, Yu, SC & Wisnom, MR. 'Large enhancement of GMI effect in polymer composites containing Co-based ferromagnetic microwires', *Journal of Magnetism and Magnetic Materials*, **316**, (pp. 253-256), 2007. ISSN: 0304-8853 10.1016/j.jmmm.2007.02.112 [PDF](#)

2006

72. Phan, MH, Peng, H-X, Seong-Cho Yu & Vasquez, M. 'Optimized giant magnetoimpedance effect in amorphous and nanocrystalline materials', *Journal of Applied Physics*, **99**, (pp. 08C505-1-08C505-3), 2006. ISSN: 0021-8979 10.1063/1.2162089 [PDF](#)
73. Phan, MH, Peng, H-X, Seong-Cho Yu, Nguyen Duc Tho, Thi Hanh & Nguyen Chau. 'Large magnetocaloric effect in $\text{Pr}_{1-x}\text{Pb}_x\text{MnO}_3$ (0.1 ≤ x ≤ 0.5) perovskites', *Journal of Applied Physics*, **99** (8), (pp. 08Q108-1-08Q108-3), 2006. ISSN: 0021-8979 10.1063/1.2172212 [PDF](#)
74. Phan, MH, Peng, H-X, Wisnom, MR, Seong-Cho Yu & Nguyen Chau. 'Effect of annealing on the microstructure and magnetic properties of Fe-based nanocomposite materials', *Composites Part A: Applied Science and Manufacturing*, **37**(2), (pp. 191-196), 2006. ISSN: 1359-835X 10.1016/j.composites.a.2005.01.033 [PDF](#)
75. Phan, MH, Peng, H-X, Wisnom, MR, Yu, SC, Kim, CG & Nghi, NH. 'Effect of annealing temperature on permeability and giant magneto-impedance of Fe-based amorphous ribbon', *Sensors and Actuators A*, **129**(1-2), (pp. 62-65), 2006. ISSN: 0924-4247 10.1016/j.sna.2005.09 [PDF](#)

2005

76. Peng, H-X, Dunne, FPE, Grant, PS & Cantor, B. 'Dynamic densification of metal matrix-coated fibre composites: modelling and processing', *Acta Materialia*, **53** (3), (pp. 617-628), 2005. ISSN: 1359-6454 10.1016/j.actamat.2004.10.015 [PDF](#)
77. Peng, H-X. 'A review of "Consolidation effects on tensile properties of an elemental Al matrix composites"', by Tang, F Meeks, JE Spowart, T Gnaeupel-Herold, H Anderson, E. *Materials Science and Engineering A* **396**, **A396**, (pp. 1-2), 2005. ISSN: 0921-5093 10.1016/j.msea.2004.12.043 [PDF](#)

78. Peng, H-X. 'Manufacturing titanium metal matrix composites by consolidating matrix coated fibres', *Journal of Materials Science and Technology*, **21 No.5**, (pp. 647-651), 2005. ISSN: 1005-0302 [PDF](#)
79. Phan, MH, Peng, H-X & Yu, S-C. 'Large magnetocaloric effect in single crystal $\text{Pr}_{0.63}\text{Sr}_{0.37}\text{MnO}_3$ ', *Journal of Applied Physics*, **97, Vol.1**, (pp. 10M306-1-10M306-3), 2005. ISSN: 0021-8979 10.1063/1.1849554 [PDF](#)
80. Phan, MH, Peng, H-X, Wisnom, MR & Seong-Cho Yu. 'Giant magnetoimpedance effect in ultrasoft FeAlSiBCuNb nanocomposites for sensor applications', *Journal of Applied Physics*, **98 (1)**, (pp. 0146316-1-0146316-7), 2005. ISSN: 0021-8979 10.1063/1.1953864 [PDF](#)
81. Phan, MH, Peng, H-X, Wisnom, MR, Seong-Cho Yu, Cheol Gi Kim & Vazquez, M. 'Neutron irradiation effect on permeability and magnetoimpedance of amorphous and nanocrystalline magnetic materials', *Physical Review, B*, **71 (13)**, (pp. 134423-1-134423-5), 2005. ISSN: 1098-0121 10.1103/PhysRevB.71.134423 [PDF](#)
82. Phan, MH, Peng, H-X, Wisnom, MR, Yu, SC & Chau, N. 'Valve behavior of the giant magneto-impedance in field-annealed $\text{Co}_{70}\text{Fe}_5\text{Si}_{15}\text{Nb}_{2.2}\text{Cu}_{0.8}\text{B}_7$ amorphous ribbon', *Journal of Applied Physics*, **97**, (pp. 10M108-1-10M108-3), 2005. ISSN: 0021-8979 10.1063/1.1854891 [PDF](#)
83. Phan, MH, Peng, H-X, Yu, S-C & Hur, NH. 'Large magnetic entropy change above 300 K in a $\text{La}_{0.7}\text{Ca}_{0.2}\text{Sr}_{0.1}\text{MnO}_3$ single crystal', *Journal of Magnetism and Magnetic Materials*, **290-291(1)**, (pp. 665-668), 2005. ISSN: 0304-8853 10.1016/j.mmm.2004.11.033 [PDF](#)
84. Phan, MH, Peng, H-X, Yu, S-C, Tho, ND & Chau, N. 'Large magnetic entropy change in Co-doped manganites', *Journal of Magnetism and Magnetic Materials*, **285(1-2)**, (pp. 199-203), 2005. ISSN: 0304-8853 10.1016/j.mmm.2004.07.041 [PDF](#)

Prior to 2004

85. Phan, MH, Peng, H-X, Wisnom, MR, Yu, SC & Chau, N. 'Enhanced GMI effect in a $\text{Co}_{70}\text{Fe}_5\text{Si}_{15}\text{B}_{10}\text{Cu}$ and Nb substitution for B', *Physics Status Solids*, **201(7)**, (pp. 1558-1562), 2004. ISSN: 0031-8695 10.1002/pssa.200306791 [PDF](#)
86. Peng, H-X, Dunne, FPE, , K.H. Baik, Grant, PS. 'Fibre re-arrangement and matrix softening phenomena in matrix-coated-fibers (MCFs) composites', *Mater. Sci. Eng. A*, 2003, **A346**, (pp.246-253),. ISSN: 1359-6454 10.1016/j.actamat.2004.10.015 [PDF](#)
87. Peng, H-X, Fan, Z, Mudher, DS & Evans, JRG. 'Microstructures and mechanical properties of engineered short fibre reinforced aluminium matrix composites', *Materials Science & Engineering, Part A*, **335 (1-2)**, (pp. 207-216), 2002. ISSN: 0921-5093 10.1016/S0921-5093(01)01930-X [PDF](#)
88. Peng, H-X & Fan, Z. 'Immiscible systems produced by squeeze casting of engineered metallic foams', *Journal of Materials Science Letters*, **20(19)**, (pp. 1769-1771), 2001. ISSN: 0261-8028 10.1023/A:1012578915351 [PDF](#)

-
89. Peng, H-X, Fan, Z & Evans, JRG. 'Bi-continuous metal matrix composites', *Materials Science & Engineering, Part A*, **303(1-2)**, (pp. 37-45), 2001. ISSN: 0921-5093 10.1016/S0921-5093(00)01879-7 [PDF](#)
90. Peng, H-X, Fan, Z & Evans, JRG. 'Cellular arrays of alumina fibres', *Journal of Materials Science*, **36(4)**, (pp. 1007-1013), 2001. ISSN: 0022-2461 10.1023/A:1004892310835 [PDF](#)
91. Peng, H-X, Fan, Z & Evans, JRG. 'Novel MMC microstructure with tailored distribution of the reinforcing phase', *Journal of Microscopy*, **201 (2)**, (pp. 333-338), 2001. ISSN: 1365-2818 10.1046/j.1365-2818.2001.00780.x [PDF](#)
92. Zhou, Z, Fan, Z, Peng, H-X & Li, DX. 'High-resolution electron microscope observation of interface microstructure of a cast Al-Mg-Si-Bi-Pb(6262)/Al₂O_{3p} composite', *Journal of Microscopy*, **201(2)**, (pp. 144-152), 2001. ISSN: 1356-2818 10.1046/j.1365-2818.2001.00834.x [PDF](#)
93. Peng, H-X, Z. Fan & D. Z. Wang. 'In situ Al₃Ti-Al₂O₃ intermetallic matrix composite: Synthesis, microstructure and compression behaviour', *Journal Materials Research*, **15 (9)**, (pp. 1943-1949), 2000. [PDF](#)
94. Peng, H-X, Z. Fan & J.R.G. Evans. 'Factors affecting the microstructure of a fine ceramic foam', *Ceramic International*, **26**, (pp. 887-895), 2000. 10.1016/S0272-8842(00)00032-8 [PDF](#)
95. Peng, H-X, Z. Fan & J.R.G. Evans. 'Microstructure of ceramic foams', *Journal of Euro. Ceram. Society*, **20(7)**, (pp. 807-813), 2000. 10.1016/S0955-2219(99)00229-0 [PDF](#)
96. Peng, H-X, Z. Fan & J.R.G. Evans. 'Novel MMC microstructure prepared by infiltration of reticulate ceramic preforms', *Materials Science and Technology*, **16 (7-8)**, (pp. 903-907), 2000. 10.1179/026708300101508667 [PDF](#)
97. Z. Zhou, Peng, H-X, Z. Fan & D. X. Li. 'MMC with a controlled non-uniform distribution of submicron Al₂O₃ particle in a 6061Al matrix', *Materials Science and Technology*, **16 (7-8)**, (pp. 908-912), 2000. 10.1179/026708300101508676 [PDF](#)
98. L. Geng, S. Ochiai, Peng, H-X, L. Gao, J. Sun & Z. Q. Sun. 'Fabrication of nanocrystalline ZrO₂ particle reinforced Al alloy composite by squeeze casting route', *Scripta Materialia*, **38 (4)**, (pp. 551-557), 1998. [PDF](#)
99. Peng, H-X, D. Z. Wang, L. Geng & C. K. Yao. 'Evaluation of the microstructure of Al₃Ti-Al₂O₃-Al in-situ composite', *Scripta Materialia*, **37(2)**, (pp. 199-204), 1998. [PDF](#)
100. Peng, H-X, Y. Cui, L. Geng, DZ Wang & Z.Sun. 'Flexural strength of Al₂O₃-Al₃Ti-Al in situ reaction processed composites', *Acta Materialia Composites Sinica*, **15**, (pp. 48-52), 1998. [PDF](#)

101. W. L. Zhang, L. Cai, Peng, H-X, D. Z. Wang & C. K. Yao. 'Forming process of hot-extruded SiCw/6061Al composites', *Transactions of Nonferrous Metal Society*, **8(1)**, (pp. 432-428), 1998. [PDF](#)
102. Y. Cui, X. Li, Peng, H-X & C. K. Yao. . 'Interface characterisation of discontinuously reinforced metal matrix composites based on wavelet analysis of acoustic emission behaviour', *Chinese Science Bulletin*, **43(9)**, (pp. 791-792), 1998. [PDF](#)
103. W. Gu, Peng, H-X, Z. Liu & D. Z. Wang. 'Roles of orientation relationship and recrystallization in superplasticity of SiCw/6061Al composite', *Transactions of Nonferrous Metal Society*, **7 (1)**, (pp. 1-5), 1997. [PDF](#)
104. Peng, H-X, D. Z. Wang, L. Geng & C. K. Yao. 'In-situ processed Al₃Ni-Al₂O₃-Al composite', *Materials Science and Technology*, **4**, (pp. 11-16), 1996. [PDF](#)
105. Peng, H-X, D. Z. Wang, L. Geng & C. K. Yao . 'SHS process of a dense TiO₂/Al for Al₃Ti-Al₂O₃-Al in-situ composite', *International Journal of SHS*, **5(3)**, (pp. 285-292), 1996. [PDF](#)
106. D. Z. Wang, Peng, H-X, J. Liu & C. K. Yao. 'Effects of ageing and whisker-orientation on wear behaviour of SiCw-Al composite under unlubricated sliding friction', *Composites Science and Technology*, **53**, (pp. 21-25), 1995. [PDF](#)
107. D. Z. Wang, Peng, H-X, J. Liu & C. K. Yao. 'Wear behaviour and microstructural changes of SiCw/Al composites under unlubricated sliding friction', *Wear*, **184**, (pp. 187-192), 1995. [PDF](#)
108. Peng, H-X, D. Z. Wang, L. Geng & C. K. Yao. 'Synthesis of Al₃Ni-Al₂O₃-Al in-situ composite via squeeze casting route', *Transactions of Nonferrous Metal Society*, **5(2)**, (pp. 776-779), 1995. [PDF](#)
109. Peng, H-X, D. Z. Wang & C. K. Yao. . 'Tribological characteristic of squeeze-cast SiCw/Al metal matrix composites', *Materials Science and Technology*, **2(4)**, (pp. 114-120), 1994. [PDF](#)
110. Peng, H-X, D. Z. Wang, J. Liu & C. K. Yao. 'Dry sliding wear behaviour of SiCw/Al composite', *Journal of Materials Research*, **8(4)**, (pp. 381-384), 1994. [PDF](#)

Refereed Conference Papers

(Over 80 conference publications, detail available on request)

Significant Technical Reports:

No.	Author(s)	Report Title	Report to	Total Pages	Contribution
1.	H.X. Peng	Characterisations of polymer based nanocomposite coatings	DSTL, UK, March 2007	21	100%
2.	H. X. Peng, K.D Potter and M.R. Wisnom	Assessment of materials and technologies for lightning strike protections	Airbus-UK, Oct. 2006	36	70%
3.	D. Baker, M.I. Friswell, H.X. Peng and N.A.J. Lieven	Smart Structures with Application to Aerospace	Airbus-UK, March 2005	29	Contribute to materials section (20%)
4.	H. X. Peng and M.R. Wisnom	The State-of-the-Art of Polymer Based Wear Resistant Coatings	Dowty Propellers, June 2004	15	90%
5.	H. X. Peng, M.I. Friswell and N.A.J. Lieven	Smart Materials and Structures Assessment-01 Part-I: Smart technologies for vibration control Part-II: Smart Materials and Structures	Airbus-UK, March 2004	16	80%
6.	H. X. Peng, D. Baker, M.I. Friswell, N.A.J. Lieven	Smart Materials and Structures Assessment-02 <i>Part-I: Materials suitable for actuating applications</i> <i>part-II: Aeronautical: Low Frequency Airfoil Shape Changes</i>	Airbus-UK, April 2004	11	Primary Author of Part-I (40%)
7.	H. X. Peng, D. Baker, M.I. Friswell, N.A.J. Lieven	Smart Materials and Structures Assessment-03 <i>Part-I: Electro-Active Polymers (EAP)</i> <i>Part-II: Aeronautical Applications: Patent Search</i>	Airbus-UK, June 2004	17	Primary Author of part-I (40%)
8.	H. X. Peng, D. Baker, M.I. Friswell, N.A.J. Lieven	Smart Materials and Structures Assessment-04 <i>Part-I: Shape Memory Materials (1): Shape memory polymers (SMP)</i> <i>Part-II: Aeronautical Applications: Piezoelectric Actuation; Kagome Lattice Structures; Deployable Structures</i>	Airbus-UK, July 2004	26	Primary Author of Part-I (40%)
9.	H. X. Peng, M.I. Friswell, N.A.J. Lieven	Smart Materials and Structures Assessment-05 Shape Memory Materials (2): -- <i>Shape Memory Alloys (SMA) & SMA composites</i> Magnetic Shape Memory (MSM) Alloys	Airbus-UK, Nov. 2004	11	Primary Author (80%)

Media Contributions:

No.	Article Title	Magazine	Year; Vol: Page
10.	<i>Teaching Materials and manufacturing Processes,</i>	The Brief , Faculty of Engineering	Spring 2007. p.10.
11.	<i>Novel Composites</i>	<i>re: search</i> , University of Bristol	2005; 9, p.7
12.	<i>Composites go from strength to strength</i>	Eureka , http://www.eurekamagazine.co.uk	2004; 24(5) p.31-32.

(9) Research Grants

Funding Sources	Role	Project Title	My Contribution	Total	Starting Date	End Date
EPSRC	Member of core team (8)	ACCIS Doctor Training Centre in Composites	356,000 (5% of total)	7.12M	10/2009	09/2014
Ibid		ibid	290,000	5.8M	10/2014-	09/2019
Rolls-Royce UTC	Member of core team (8)	UTC in Composites	220,000 (5% of total)	4.4M	6/2007	12/2017
Royal Society	PI	In-situ Ti matrix composites	12,000		1/06/2010	06/2012
EPSRC Feasibility study	PI	Microwave tunable composites	18,200		1/02/2012	06/2012
EPSRC (EP/F03850X)	PI	Magnetic microwire for self-monitoring composite	98,175		08/2008	08/2009
EPSRC/Airbus-UK	PI	Development of conductive nanocomposite paints	95,500		02/2008	8/2011
Rolls-Royce plc	PI	Dynamic behaviour of nanocomposites	30,000		10/2008	9/2011
KTP CASE / GE	PI	Novel actuation materials	83,000		8/2007	7/2010
DSTL (MoD)	PI	Characterisation of nanocomposite coatings	32,500		04/2006	03/2008
Airbus-UK	PI	Materials assessment for lightning strike protection	15,000		4/2006	10/2006
EPSRC/ GE (Smiths)	Co-I	UTSP – SMARTCOMP	125,000	1.25M	8/2005	7/2010
EPSRC (EP/C532392)	PI	Composites with hierarchical microstructures	126,000		08/2005	1/2008
Royal Society Conference	PI	2004, 2005, 2006, 2007	4,950		2005-7	---
EPSRC CASE award Dowty & Westland	PI	Erosion resistant polymer-based nanocomposite coatings	88,000		11/2004	04/2008
Airbus-UK	Co-I	Assessment of smart structures and materials	25,000	45,000	03/2004	02/2005
Dowty Propellers	PI	State-of-the-art of polymer erosion resistant coatings	5,000		04/2004	06/2004
Chinese Postdoctoral Science Foundation	PI	Nanosized particulate reinforced Al matrix composites	~8,000		01/1997	12/1998
TOTAL			£ 1,636,000	£17.68M		

In addition: -- Principal advisor of PhD students receiving 7 ORS awards with an estimated total value of **£0.52M**.

-- Being a core member of the ACCIS team that has helped secure (1) The **National Composites Centre (NCC, £25M)** in Bristol University in 2009, with further 2nd phase investment of £28 M in 2012 and (2) EPSRC Program grant (**£6M**) in 2012.

(vi) Research Related Administration

- **Deputy Director**, Bristol Centre for Nanoscience and Quantum Information (NSQI, 2011-).
 - Running the centre activities such as those involved with DTC in Functional Nanomaterials;
 - Already successful in the major task of getting the Langford research lab up and running to accommodate research activities that are affected by the Life Science project.
 - Identifying the potential funds and research proposals, promoting multidisciplinary research across four Faculties.
- Member of the Faculty promotion committee (2013-)
- Managing resources:
 - Founding member of the Strategy and Management Committee of the NSQI Centre (2006 -).
 - Running research grants, e.g. EPSRC, Royal Society, GE Aviation, Airbus, DSTL.
 - Helping Drs. Phan/Qin bid for the Royal Academy of Engineering/EPSCRC fellowships.
- Managing activities:
 - Leading a research group up to 9 (14 at one time) members in novel materials and composites.
 - As part of the team that bid to Rolls-Royce University Technology Centre (UTC) in Composites resulting in the £4.4M UTC contract (2007).
 - Organizing the Metal Matrix Composite session of the 17th International Conference on Composite Materials (ICCM-17), the largest international conference in the field.
 - Organizing the 9th and 10th CMA-UK Materials congresses promoting scientific exchange between the UK and China (2002/4).
 - Lecturing at the Bristol Enterprise Network – Nanomaterials event, promoting public understanding of nanotechnology (2007).
- Managing people
 - Acting as **Academic Mentor** for Dr. Rahatekar – a young DTC lecturer.
 - Managing 3 postdoctoral researchers (2 completed and moved on) and 6 visiting research fellows:
 - Dr. FX Qin, Microwave tunable composites, (10/2010-)
 - Dr. N. Pankratov, Magnetic microwires for monitoring composites (8/2008-7/1009)
 - Dr. J. Zhao, Novel composite microstructures, (8/2005-3/2008)
 - Dr. MH Phan, Magnetic sensors and self-monitoring composites, (9/2006-12/2007)
 - Prof. YJ Liu, Mechanics of nanostructures, (10/2010-8/2011)
 - Prof. Geng, Ti metal matrix composites, (2010/2011)
 - Dr. Y Liu, Nanocomposite coatings, (10/2010-9/2011)
 - Dr. YW Li, Bionic Surface Engineering, (8/2009-7/2010)
 - Dr. Y. Wang, High temperature composites, (1/2008 – 9/2009)
 - Dr. X. Zhou, Ceramic and carbon composites, (2/3008 -1/2009)
 - Prof. Q. Zhang, Bulge forming of steel tubes, (11/2004-5/2005)

(8) ACADEMIC LEADERSHIP AND CITIZENSHIP

(i) Academic leadership in the discipline

- Established an own area of research in nanomaterials and nanocomposites in the Faculty of Engineering which forms an important area of research within the NSQI centre.
- Member of Organising Committee of the major international conference ICCM-17, Edinburgh, UK.
- Member of International Scientific Committee of the 2nd & 3rd Int. Conf. Smart Materials and Nanotechnology, Weihai & Shenzhen, China.
- Vice-President of the Chinese Materials Association (CMA-UK), organizing the 9th and 10th CMA-UK Materials Congress promoting scientific exchange between the UK and China.

- Professional member of the Institute of Nanotechnology. Invited reviewer for research proposals in nanomaterials and nanocomposites for British Council and the UNIVERSITÉ DU LUXEMBOURG.
- Across Department and Faculty collaborations in research, such as:
 - Interdisciplinary collaborations between Faculties of Engineering, Science (Physics and Chemistry) and Medicine and Dentistry as well as the Bristol Colloidal Centre (BCC).
 - Magnetic nanocomposites with Physics department (Prof. Schwarzacher).
 - Nanocomposite coatings with Chemistry (Prof. Mann) and BCC (Dr. Reynolds)
 - Bi-continuous composites with Dental School (Dr. Su)

(ii) *Academic leadership in the University*

- 8/2011 -, Deputy Director of the NanoScience and Quantum Information (NSQI).
- 8/2011-, Queens School Deputy Director of Study for Postgraduate research students.
- 8/2010 -. Member of the Senate.
- 2006-2011, Department Examination Officer & 2nd Year Tutor
 - Member of the Faculty Advisory Board and Faculty Exam Board; Member of the Department Teaching Committee, Special Circumstances Committee.
 - Setting the timetable, arranging year forum, handling student-complaints, coordinating and guiding the students to select optional courses, handling confidential student-data.
- Internal PhD examiner for 6 students including 2 in Medicine Faculty.
- 2004 Representing the Department at the University Plagiarism workshop & University eLearning Consultation event
- 2003- Coordinating Material lectures within the Structures & Materials Unit.

(iii) *Professional activities outside the University*

- External PhD examiner for 5 International universities and 5 national Universities.
- Consultancies to industries:
 - Dowty Propellers on erosion resistant coatings (2003-2007).
 - Airbus UK on materials for lightning protections (2006-)
 - Airbus UK on smart materials and structures technology (2004)
- Professional Membership:
 - Professional Member of the Institute of Nanotechnology (MIn), UK. (11/2004 -).
 - Member of the Institute of Materials, Minerals and Mining (IoM³), U.K. (1/2000 -).
 - Member of American Institute of Aeronautics and Astronautics (AIAA). (2006-)
 - Executive member of the Chinese Materials Association (CMA)-UK (8/2001-).
- Vice-President and Secretary General of the Chinese Materials Association (CMA)–UK.
 - Running the Association and organizing congresses (8/2001- 8/2004), prompting scientific exchanges between the UK and China.
 - Successfully organized the 9th CMA-UK Congress (2002, Oxford) and the 10th CMA-UK Congress (2004, Birmingham).
- Regular technical reviewer of over 20 academic Journals and Books (e.g.):

- <i>Advanced Materials</i>	- <i>Philosophical Magazine</i>
- <i>Acta Materialia</i>	- <i>Scripta Materialia</i>
- <i>Book review for Springer UK</i>	- <i>Journal of Microscopy-Oxford</i>
- <i>Materials Science and Eng. A</i>	- <i>Advanced Applied Ceramics</i>
- <i>Composites Part A</i>	
- <i>Composites Science and technology</i>	

- Industrial liaison: In addition to strong international and national collaborations with academic institutions, I have close interaction with the following industrial companies:

Within the UK: Rolls-Royce, QinetiQ, Airbus, Westland Helicopters, Dowty Propellers, Dytech Corporation Ltd, HP Technical Ceramics Ltd, Aerospace Metal Composites (AMC), 3M UK.

Outside the UK: Zyvex Corporation, MicroFir Tehnologii Industriale (MFTI), PPG Aerospace, Cornerstone Research Group (CRG)

(iv) *Contributions to Society*

- 2007- Honorary Chairman of Chinese Scholars and Students Association (CSSA)-Bristol, providing support in dealing with the University and Bristol City Council.
- 2006- Member of the Avon Chinese School governing board; providing parents with information about the University's admission procedures.
- 2006/7- Promoting public awareness in nanotechnology as invited speaker at the Bristol Enterprise Network – Nanomaterials event and at The Annual Bristol Colloid Centre Awareness Forum.

(v) *Good citizenship*

Always bringing goodwill and an enthusiastic and positive attitude, I have been willing to be involved in every aspect of Department/Faculty/University's life. Specific activities include:

- Routinely advising colleagues on recruiting overseas students from Chinese universities. Providing information to the Faculty for promoting MSc Courses in China;
- Frequently helping admin staff (e.g. Melissa Bevan) with managing students' files written in Chinese.
- Actively involved in Department Teaching Committee, Dept Special Circumstances Committee, Faculty Advisory Board, Faculty Exam Board, the University's NSQI Management committee.
- Volunteered to manage the department account on FindAPhd.com for advertising research postgraduate studentships and postdoc positions (2006-2009). Manning the department stands during Open days.
- Participating in workshops/events at University level such as E-learning Consultation, Plagiarism, Disability Awareness- learning for deaf students etc.