

Curriculum Vitae

Huang Yizhong

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Academic Qualification:

DATE	INSTITUTE	QUALIFICATION
03/95-03/98	University of Science & Technology Beijing	Ph.D.
09/92-03/95	Beijing Institute of Aeronautical Materials	M.E.
09/88-07/92	University of Science & Technology Beijing	B.E.

Working Experience:

03/15–Present Associate Professor (Tenured) in Nanyang Technological University (NTU) and Visiting Scholar in University of Oxford

07/10–02/15 Assistant Professor in Nanyang Technological University (NTU) and Academic Visitor in University of Oxford

11/08–06/10 Visiting Assistant Professor in NTU and Visiting Scholar in Harvard University

- Committed to teaching courses/tutorials.
- Conducting research on fabrication, processing and characterization of nanostructured materials for energy applications
- Supervising postdocs and postgraduates (Master and PhD) and Mentoring undergraduate students in materials science and engineering.
- Training students and research staff and supporting academic staff and their groups with materials characterization
- Engaging research collaboration and writing research proposals for funding security.
- Responsible for some administrative tasks.

11/03–10/08 Research Fellow, Faculty Member and Duty Manager in University of Oxford

- Responsible for teaching an electron microscopy modular course and instrumentation support including Transmission Electron Microscopy (TEM) and Focused Ion beam (FIB) system. Assisting researchers with their projects in information storage, fundamental studies of low dimensional structures, studies of inorganic-organic interfaces and materials failure at the nano-scale in the Department of Materials. My own research interests are mainly focused on: (i) Fabrication and characterisation of nanostructured materials; (ii) Characterization of environmentally-induced cracking of stainless steels and zirconium alloy at micro/nano-scale; (iii) Investigation of biodegradation of materials (such as PLGA, Cement and Ti) in reaction with macrophagic bone cells by observing their interface.

05/02-11/03: Research Associate and Instrument Leader (TEM) in Sheffield Hallam University

- Synthesis and characterization of a novel nanocomposite self-lubricant thin film in terms of topographical, microstructural, compositional characteristics using AFM/SEM, (S)TEM, XRD, XPS and Raman Spectroscopy.

05/00-05/02: Postdoctoral Research Assistant in Oxford University

- Site-specific nanomachining of areas of interest.
- Characterization of microstructure and microchemistry of environmentally-assisted cracks and crack tips.

- 07/98-05/00: Research Assistant in National University of Singapore**
- Investigation of electrochemical corrosion behaviour and surface analysis of titanium-based biomaterials for surgical implants using XRD, XPS and SEM.
 - Characterization of anodic oxide film, magnetic coating and ceramic coating grown by electrochemical method, electroplating and CVD.
- 10/98-02/99: Visiting Scientist in Linkoping University of Sweden**
- Synthesis of nanostructured multilayer thin film TiN/NbN by a reactive magnetron sputtering.
 - Characterization of microstructure, defects and deformation behaviour of multilayer thin film.
- 03/95-06/98: Ph.D Research in University of Science and Technology Beijing**
09/92-03/95: MSc Research in Beijing Institute of Aeronautical Materials
- Study of the relationship between electrochemical corrosion and fracture behaviour (i.e. dislocation motion and microcrack initiation) of steel alloy foils.

TEACHING

Course teaching in class/lab (Note: MS3013 (Year 3)): Electrochemistry; MS4631 (Year 4): Corrosion Engineering; MS4553 (Year 4): Characterization of Materials; MS7001: Materials Laboratory Techniques; MS7003: Advanced Materials Characterization)

Academic Year	Semester	Teaching course			Teaching method	Remarks
		Type	Code	Size		
2011 - 2012	S1	Undergraduate	MS3013	125	Lecture + Tutorial	Co-ordinator
			MS4553	152	Lecture + Tutorial	Co-ordinator
		Postgraduate	MS7003	45	Lecture	Co-ordinator
	S2	Undergraduate	MS3013	117	Lecture + Tutorial	Co-ordinator
		Postgraduate	MS7003	44	Lecture	Co-ordinator
2012 - 2013	S1	Undergraduate	MS3013	126	Lecture + Tutorial	Co-ordinator
	S2	Undergraduate	MS3013	117	Lecture + Tutorial	Co-ordinator
		Undergraduate	MS4631	73	Lecture + Tutorial	Co-ordinator
2013 - 2014	S1	Undergraduate	MS3013	123	Lecture + Tutorial	Co-ordinator
		Undergraduate	MS4631	106	Lecture + Tutorial	Co-coordinator
	S2	Undergraduate	MS3013	127	Lecture + Tutorial	Co-coordinator
2014 - 2015	S1	Undergraduate	MS3013	116	Lecture + Tutorial	
		Undergraduate	MS4631	122	Lecture + Tutorial	Co-ordinator
	S2	Undergraduate	MS3013	106	Lecture + Tutorial	
	S1	Undergraduate	MS3013	171	Lecture + Tutorial	
		Undergraduate	MS 4631	84	Lecture + Tutorial	Co-ordinator
	S2	Undergraduate	MS3013	77	Lecture +	Co-ordinator

2015 - 2016		Postgraduate	MS7001	30	Tutorial Lab course	Online quiz + report
		Undergraduate	MS3013	138	Lecture + Tutorial	Co-ordinator
2016 - 2017	S1		MS4631	57	Lecture + Tutorial	Co-ordinator
		Postgraduate	MS7001	30	Lab course	Co-ordinator
		Undergraduate	MS3013	112	Lecture + Tutorial	Co-ordinator
2016 - 2017	S2	Postgraduate	MS7001	30	Lab course	Online quiz + report
		Undergraduate	MS3013	101	Lecture + Tutorial	Co-ordinator
2017 - 2018	S1		MS4631	83	Lecture + Tutorial	Co-ordinator
		Postgraduate	MS7001	30	Lab course	Online quiz + report
		Undergraduate	MS3013	121	Lecture + Tutorial	Co-ordinator
2018-2019	S1		MS4631	51	Lecture + Tutorial	Co-ordinator
		Postgraduate	MS7001	31	Lab course	Online quiz + report
		Undergraduate	MS3013	118	Lecture + Tutorial	Co-ordinator
	S2		MS4631	65	Lecture + Tutorial	Co-ordinator
		Postgraduate	MS7001	30	Lab course	Online quiz + report
		Undergraduate	MS3013	121	Lecture + Tutorial	Co-ordinator
2018-2019	S2		MS4631	56	Lecture + Tutorial	Co-ordinator
		Postgraduate	MS7001	31	Lab course	Online quiz + report
		Undergraduate	MS3013	123	Lecture + Tutorial	Co-ordinator
2019-2020	S1		MS4631	51	Lecture + Tutorial	Co-ordinator
		Postgraduate	MS7001	30	Lab course	Online quiz + report
		Undergraduate	MS3013	181	Lecture + Tutorial	Co-ordinator
2019-2020	S2		MS4631	51	Lecture + Tutorial	Co-ordinator
		Postgraduate	MS7001	30	Lab course	Online quiz + report
		Undergraduate	MS3013	114	Lecture + Tutorial	Co-ordinator
2020-2021	S1		MS4631	30	Lecture + Tutorial	Co-ordinator
		Postgraduate	MS7001	30	Lab course	Online quiz + report
		Undergraduate	MS3013	114	Lecture + Tutorial	Co-ordinator

RESEARCH

(1) A research group with visiting scientists, post-doctorates, postgraduates and final year undergraduates supervised currently:

- 5 Visiting scientists
- 2 Research Fellow
- 6 Ph.D postgraduates (3 supported by RSS and 3 by NTU IGS) + 3 Master students (one Vingroup funded and two self-funded)
- 102 Final year undergraduates between 2010 and 2021

(2) Research grants from 2009 - 2021:

1. "Advanced Chemical Looping Combustion for CO₂ Capture", A*Star SERC grant M4070062 (S\$907,192), 18 May 2009 – 17 November 2012, **Principal Investigator**.
2. "Development of Advanced Failure Analysis Techniques", DSO National Laboratories M4060464 (S\$400,000), 1 December 2009 – 31 December 2014, **Principal Investigator**.
3. "A Rapid fabrication of Ordered Nanostructural Arrays "SUG (start-up) funding M4080293 (S\$100,000), July 2010 – June 2014, Principal Investigator.
4. "Semiconductor Nanoarray for a Novel Solar Cell", Tier 1 funding of MOE M4010992 (S\$100,000), March 2012 – February 2015, **Principal Investigator**.
5. "Electro-deposition of Gold and Nickel films for Smart Card Application" IPP graduate research grant (S\$200,000 share out of S\$424,000), August 2012 – July 2016, **CO-Principal Investigator**.
6. "Corrosion and Electrochemical Behavior of Nano-sclae Metals in Aqueous Solutions" NNSF of China grant 51271031 (300,000 RMB share out of 800,000 RMB), January 2013 – December 2016, **Co-Principal Investigator**.
7. "Perfectly Ordered Nano-Heterojunction Arrays for Optoelectronic Applications", Tier 2 funding of MOE M4020159 (S\$587,386), 1 January 2014 – 31 December 2016, **Principal Investigator**.
8. "Anode Diagnostics Li-ion and Li-O₂ Batteries", Johnson Matthey Public Limited Company – NTU R&D M406B60000 (S\$120,000), 24 March 2014 – 23 March 2018, **Principal Investigator**.
9. "Electrical Power and Control Systems – EPACS", Rolls Royce (RR)-National Research Foundation (NRF), Total grant: S\$974,899 (10% share out of the grant: S\$97,500), 1 August 2013 – 31 July 2018, **CO-Principal Investigator**.
10. "Controllable compound semiconductor nanowires and nanowire p-n structures for high efficiency organic photovoltaic solar cells (Ongoing)", Tier 1 funding of MOE (S\$30,000 share out of S\$100,000), 01 November 2012 – 30 October 2017, **CO-Principal Investigator**.
11. "Flexible Energy Storage Devices based on Carbonaceous Electrode Support", Tier 2 funding of MOE (S\$210,000 share out of S\$871,711), 01 November 2015 – 30 October 2018, **CO-Principal Investigator**.
12. "Novel Hybrid Nanostructure Arrays for Multiplexing Electrochemical Immunosensors", Tier 1 funding of MOE, S\$99,666.67, 02 November 2015 – 01 November 2018, **Principal Investigator**.
13. "Large-area and ordered Au nanoarrays for High Electrocatalytic Performance", Tier 1 funding of MOE M4011959.070 (S\$100,000), March 2018 – February 2022, **Principal Investigator**.
14. "ARMS2.3- High Temperature Hard Magnetic Materials for Electric Propulsion" RR-NRF-NTU grant, S\$1,340,000 M4062593.J27.601001, 01 January 2019 – 31 December 2024, **Principal Investigator**.
15. "Exploring the Impact of Atomic Lattice Deformation on Oxygen Evolution Reaction Based in a pure Face-centred Cubic High-entropy Alloy Electrocatalyst". Tier 1 funding of MOE 04MNP002134C150 (RG79/20: S\$130,000), November 2020 – October 2022, **Principal Investigator**.

(3) Service as editor and associate editor for international journals

- 06/20– Present Editorial Board of Nanomaterials
- 04/19 – Present Editorial Board International Journal of Minerals, Metallurgy and Materials

06/14 – Present Associate Editor, Journal of Nanoscience Letters
05/08 – 04/14 Advisory Board in Journal of Nanoscience and Nanotechnology Letters
07/07 – 12/08 Guest editor in Journal of Nanoscience and Nanotechnology
11/06 – Present Editorial Board of International Journal of Molecular Engineering

(4) Invited presentation at scientific meetings/workshops/Universities

Invited Speaker in University of Science and Technology Beijing, 22 December 2021 (online)
Invited Speaker in Hubei University of Technology China, 11 April 2021 (online)
Invited Speaker in NTU Singapore: Interdisciplinary Graduate Programme (IGP) Supervisor Talk, 07 April 2021 (online)
Invited Speaker In University of Loughborough, 09 January 2020
Invited Speaker in University of College London, 29 November, 2019
Invited Speaker in 1st international conference for resistant steel corrosion, 30 August – 01 September 2019, Nanjing, China
Invited speaker in University of Science and Technology Beijing 14 June 2019
Invited speaker in Hubei University of Technology 19 May 2019
Invited speaker in International Workshop on Materials and Design Oxford, UK, March 29-April 1, 2019
Invited speaker in 2017 2nd China International Symposium on Energy Materials and Chemistry 9 – 12 June 2017, Changsha, Hunan, P.R. China
Invited speaker in Nanotech France 2016, International Conference & Concurrent Nano Events June 1 - 3, 2016, Paris, France
Invited speaker in the international workshop on the frontiers of advanced functional materials, 20-22 July 2016, Hangzhou, China
Invited speaker in Xi'an Jiaotong University, the 8th International Workshop on Materials Behavior at the Micro- and Nano- Scale, 01-03 June 2015, Xi'an, China
Invited speaker in Northwestern University (NU) for MRSEC Seminar Series, USA, 11 June 2014, which is a prestigious platform conducted by top researchers worldwide who are invited by Materials Research Science and Engineering Center in NU
Invited speaker in University of Oxford, UK, 07 June 2014
Invited speaker in Yanshang University, China, 29 May 2014
Invited speaker in University of Science and Technology Beijing, China,
Invited speaker in Nano-SMAT Asia at Wuhan, China, 13-15 March 2013
Invited speaker in Institute of Physics Singapore Meeting, co-organized by Institute of Physics UK, 4-6 March 2013
Invited speaker in In-situ TEM observation workshop at NTU, 5-6 November 2012
Invited speaker in Carl Zeiss FIB/TEM workshop at NUS, 17-19 April 2012
Invited speaker in China/Singapore Young Chemist Forum, 12-16 April 2012
Invited speaker in Singapore FIB/TEM User Group Meeting, 20th Oct 2011
Keynote Speaker in BIT's 1st Annual World Congress of Nano-S&T, October 23-26, 2011, Dalian, China
Invited speaker in Tianjing Chengjian University, China, 16 December 2009
Invited speaker in Tianjing University, China, 17 December 2009
Invited speaker in Nanjing University of Aeronautics and Astronautics, China, 11 June 2008
Invited keynote speaker in CAPADOCIA SOFC WORKSHOP on 'Solid Oxide Fuel Cells and Nano-Ionics', 3RD NANOCOFC MEETING, Nigde Turkey, 1-3 November 2007
Invited speaker in Jiangshu University, China, 12, October, 2006
Invited speaker in the 3th conference of Chinese Youth Materials Science and Technology, 7-10, August 2005, Shanghai, China
Invited speaker in Southeast University, China, 08 August 2005
Invited speaker in Nanjing University of Technology, China, 08 August 2005
Invited speaker in Peking University, China, 21 December 2001

(5) Service as a reviewer

Being a reviewer of many journals such as Advanced Materials, Advanced Functional Materials, ACS Nano, Nano Energy, Applied Catalysis B: Environmental, Applied Physics Letters, Electrochemistry Communications, Electrochimica Acta, Journal of Materials Chemistry A, Small, Chemical Engineering and ACS Applied Materials & Interfaces.

(6) Session chairman/(special) session organizer in conferences/workshops

<u>Session Chair</u>	International Workshop on Materials and Design Oxford, UK, March 29-April 1, 2019
<u>Conference Chair:</u>	1 st international conference for resistant steel corrosion, 30 August – 01 September 2019, Nanjing China
<u>Symposium Chair:</u>	2nd Symposium for the promotion of Applied Research Collaboration in Asia, 25 - 28 Feb 2017, Okinawa Japan.
<u>Symposium Chair:</u>	International Conference on Materials for Advanced Technologies (ICMAT 2015) 28 June – 3 July 2015, Singapore. Symposium: Nanoelectrochemistry
<u>Co-Chair:</u>	International Conference for Top and Emerging Materials Scientist (IC-TEMS), 11-15 August 2013
<u>Session Chair:</u>	Institute of Physics Singapore Meeting, co-organized by Institute of Physics UK, 4-6 March 2013
<u>Session Chair:</u>	Nano-SMAT Asia at Wuhan, China, 13-15 March 2013
<u>Committee Member:</u>	In-situ TEM observation, MSE, NTU, 5-6 November 2012
<u>Chairman:</u>	The 12 th Annual Congress of Chinese Materials Association in UK, 20-22 June 2008 Oxford, UK
<u>Symposium Chair:</u>	The 2 ^{ed} International conference in Surface, Coatings and Nanosturctured Materials, 2007, Portugal. Symposium NNC: Nanofabrication and Nanocharacterization
<u>Symposium Chair:</u>	The 3 th conference of Chinese Youth Materials Science and Technology, 7-10, August 2005, Shanghai, China

(7) Research actives

1. Electrochemical behavior of nanostructures (Nano-electrochemistry)
2. Synthesis and characterization of functional nanostructures for catalytic activity in combination with DFT modeling and simulation.
3. Ordered hybrid functional nanostructure arrays for photovoltaic cells, LEDs, Sensors and transistors
4. Novel nanocomposites for low temperature solid oxide fuel cells
5. Self-lubricating nanocomposites for hard coatings
6. Transmission Electron Microscopy (TEM) and Focused Ion Beam (FIB).

AWARDS

Chutian Scholar in Hubei University of Technology
Winner of the Ian Ferguson Challenge 2015 as an Advisor for the Team “Multi-Functional First Aid Belt – SWAT Belt”,
Award of UK-Southeast Asia Partners in Science Collaboration Development 2012
NRP (Nanyang Research Programme) award as an Advisor 2012, Gold medal
Grand Prize in the 6th Chinese Corrosion Congress 2011
Award of the first runner-up for Start-up, 6 Finalists for NTU-Spring Singapore and Semi-finalists worldwide for Lee-Kuan-Yew SMU NUS as an Advisor of two MSE students on entrepreneurship completion 2010.
Champions of Men’s doubles in MSE badminton competition 2014 & 2015

SERVICES

Honoured Auditor for Materials Research Society Singapore (MRS-S)
Treasurer of Singapore Section of The Electrochemistry Society
Panel member of MSE Postgraduate Awards Nomination 2021

Panel member of the selection of GiveForward Scholarship 2021
Reviewer of NTU PPF 2021: Shortlisting by School - MSE
Member of MSE Curriculum Review Committee at NTU
Member of Faculty search Committee in MSE at NTU
Advisor for the Team “Multi-Functional First Aid Belt – SWAT Belt”, the Winner of the Ian Ferguson Challenge 2015
Assessor for the Nanyang Research Programme (NRP) 2015
Co-ordinator for assessment/purchase of instruments of FIB and XRD in MSE at NTU
Judge for the Singapore Science & Engineering Fair (SSEF)
Advisor of NTU undergraduate recruitment event
Advisor of entrepreneurship completion for NTU-Spring Singapore (6 Finalists), Start-up NUS (The first runner-up) and Lee Kuan-Yiew SMU (15 Finalists worldwide)
Mentor of undergraduate across Year 1 to Year 4
Supervisor of IA (industrial attachment) undergraduates
Supervisor for URECA projects
Expert mentor for Innovation Programme (IvP) Singapore
Supervisor for JC students on NRP project
Judge for NRP symposium
Organizing Member for badminton competition in MSE at NTU
Assessor of NTU H3 Science Research 2013
Supervisor for Summer Research Internship (SRI) 2014
Faculty-in-Residence of the residence of Hall 6 in NTU

Reviewer and Examiner of the oral examination panel for Master and PhD candidates
Host of seminars/meetings

PROFESSIONAL QUALIFICATIONS/MEMBERSHIPS:

07/19– Present	Editorial board on International Journal of Minerals, Metallurgy and Materials
04/19– Present	Honorary Auditor for Materials Research Society (MRS) - Singapore
04/17 – Present	Treasurer of The Electrochemical Society (ECS Singapore section)
04/09 – Present	Membership of Materials Research Society (MRS)
10/07 – Present	Guest Professor in University of Science and Technology of Beijing
04/06 – Present	Membership of American Chemical Society
12/05 – Present	Membership of International Society of Electrochemistry
11/05 – 11/08	Research Membership in Wolfson College at Oxford University
12/07 – Present	Executive member of Chinese Materials Association in UK

PUBICATIONS

BOOK

1. **Y.Z.Huang** et. al., Transparency in Ceramics, Springer, Edited by Carlos P. Bergmann, Porto Alegre, Brazil, 2015, ISSN 2364-3293, ISSN 2364-3307 (electronic), DOI 10.1007/978-3-319-18956-7

BOOK CHAPTERS

1. **Y.Z. Huang**,* Nanocharacterisation of Nanocomposite Materials, Trans Tech Publications, Edited by A. Ochsner et. al., Book Series: Materials Science Foundations Volume: 54-55 Pages: 51-91 Published: 2009
2. Lingbing Kong, Weili Yan, **Yizhong Huang**, Wenxiu Que, Tianshu Zhang and SeanLi, Carbon Nanomaterials Based on Carbon Nanotubes (CNTs), Springer, Edited by Mushahid Husain and Zishan Husain Khan, Book Series: Advanced structured Materials: Advanced Nanomaterials Volume 79 Pages: 25-102 Published: 2016

Publication of Journal Papers (Total times cited **9,131**, H-index: **48**)

Journal Name	Impact Factor (2019-2020)	Number of Published Papers
Nature Communications	12.121	5
Advanced Materials	27.398	4
Advanced Energy Materials	25.245	5
Advanced Functional Materials	16.836	5
Applied Catalysis B: Environmental	16.683	4
Energy Storage Materials	16.280	1
Nano Energy	15.548	2
ACS Nano	13.903	5
Nano-Micro Letters	12.264	1
Small	11.459	12
Journal of Materials Chemistry A	11.301	14
Nano Letters	11.238	4
Biomaterials	10.273	1
Biosensors and Bioelectronics	10.257	1
Chemistry of Materials	10.159	1
ACS Applied Materials & Interfaces	8.758	6
Nano Research	8.515	5
Journal of Catalysis	7.888	1
Chemsuschem	7.804	1
Journal of Colloid and Interface Science	7.489	1
Journal of Power Sources	7.467	8
Carbon	7.466	2
Journal of Physical Chemistry Letters	7.329	2
Acta Materialia	7.293	2
ACS Sustainable Chemistry & Engineering	6.970	1
Nanoscale	6.895	9
Journal of Materials Chemistry C	6.641	1
Corrosion Science	6.355	1
Sensors & Actuators B: Chemical	6.393	3
Electrochimica Acta	6.216	5
Materials & Design	6.210	5
Environmental Research Letters	6.192	1
Science China Materials	6.098	1
Chemical Communications	5.996	1
Science and Technology of Advanced Materials	5.866	1
Advanced Materials Technologies	5.395	2
Applied Surface Science	5.270	4
Chemosphere	5.108	1
Journal of Materials Science and Technology	5.040	2
International Journal of Hydrogen Energy	4.939	6
Chemistry – A European Journal	4.857	4
Materials Science & Engineering B	4.706	1
Materials Science and Engineering A	4.652	3
Applied Catalysis A: General	4.630	1

Progress in Organic Coatings	4.469	1
iScience	4.447	1
Journal of Alloys and Compounds	4.350	2
Journal of Physical Chemistry C	4.309	8
Electrochemistry Communications	4.197	3
Bone	4.147	3
Materials Research Bulletin	4.019	1
Scientific Reports (Nature publishing group)	3.998	1
Colloids and Surface A: Physicochemical and Engineering Aspects	3.990	1
Crystal Growth & Design	3.972	2
Materials	3.957	1
Journal of Electroanalytical Chemistry	3.807	1
Surface & Coatings Technology	3.784	1
Frontiers in Chemistry	3.693	1
Applied Physics Letters	3.590	3
Materials Characterization	3.562	1
Journal of Materials Science	3.553	2
Nanotechnology	3.551	5
Journal of Biomedical Materials A	3.525	1
Journal of American Ceramic Society	3.502	2
Electron Microscopy and Analysis	3.414	2
Physical Chemistry Chemical Physics	3.434	1
Science and Technology of Advanced Materials	3.433	1
Sensors	3.275	1
Journal of Physics D: Applied Physics	3.169	1
RSC Advances	3.119	3
CrystEngComm	3.117	1
IEEE Sensors Journal	3.076	1
Vacuum	2.906	1
Engineering Failure Analysis	2.897	1
Journal of Magnetism and Magnetic Materials	2.717	2
Materials Letters	2.687	1
Materials	2.467	1
Science in China Series E – Technological Sciences	2.302	3
Journal of Applied Electrochemistry	2.310	2
Thin Solid Films	2.030	1
Chemical Physics letters	2.029	1
Journal of Raman Spectroscopy	2.000	2
Acta Metallurgica Sinica	1.828	5
Corrosion	1.804	3
Journal of Electronic Materials	1.774	2
Microelectronics Reliability	1.740	1
IEEE Transactions on Magnetics	1.730	2
Journal of Crystal Growth	1.632	2
Journal of Microscopy-OXFORD	1.575	1
Journal of Vacuum Science & Technology B	1.511	3
Journal of Materials Engineering and	1.476	2

Performance		
Acta Crystallographica Section B – Structural Science	1.331	1
Journal of Nanoscience and Nanotechnology	1.134	3
Chinese Physics B	1.223	2
International Journal of Modern Physics B	0.803	1
University of Science & Technology Beijing	0.793	3
Journal of the Korean Physical Society	0.535	1
Journal of Nano Research	0.511	1
Rare Metal Materials and Engineering	0.485	1

2022

1. Lu Y., Huang K., Cao X., Zhang L., Wang T., Peng D. D., Zhang B., Liu Z., Wu J., Zhang Y., Chen C., **Huang Y.Z.*** (2022). Atomically dispersed intrinsic hollow sites of M-M1-M (M1=Pt, Ir; M=Fe, Co, Ni, Cu, Pt, Ir) on FeCoNiCuPtIr nanocrystals enabling rapid water redox. **Advanced Functional Materials**, In press
2. Xia J., Huang K., Yao Z., Zhang B., Li S., Chen Z., Wu F., Wu J., **Huang Y.Z.*** (2022). Ternary duplex FeCoNi alloy prepared by cathode plasma electrolytic deposition as a high-efficient electrocatalyst for oxygen evolution reaction. **Journal of Alloys and Compounds**, DOI: 10.1016/J.JALLCOM.2021.16193
3. Zhang H., Zhao T., Zhu W., Kong L., **Huang Y.Z.**, Liu H., (2022). Enhanced field emission of CuO nanowires by aluminum coating for volatile organic compound detection, **Sensors and Actuators B: Chemical**, 353, 131181. doi.org/10.1016/j.snb.2021.131181
4. Wang T., Cui Z., Liu, Y., Lu D., Wang M., Wan C., Leow W. R., Wang C., Pan L., Cao X., **Huang Y.Z.**, Liu Z., Tok L.Y., Chen X. (2021), Mechanically Durable Memristor Arrays Based on a Discrete Structure Design. **Advanced Materials**, 34, 4, 2106212, doi.org/10.1002/ADMA.202106212

2021

5. Lu L.*, Li C.J.**, Zhang Y.**, Cao X.*, Xie G**, Wang M.L.**, Peng D.D.*, Huang K., Zhang B.W.*, Wang T., Wu J. S., and **Huang Y.Z.^~** (2021). Engineering of cation and anion vacancies in Co₃O₄ thin nanosheets by laser irradiation for more advancement of oxygen evolution reaction. **Nano Energy**, in Press and proof is available online. **##**
6. Zhang Y.,** Tan H., Cao X.,* Bhowmik A., Vincent G., Lambourne A., Yan Q., **Huang Y.Z.^~** (2021). Atomic-scale oxidation of a Sm₂Co₁₇-type magnet. **Acta Materialia**, 220, 117343, doi.org/10.1016/J.ACTAMAT.2021.11734. **##**
7. Hu L., Fang Y.W., Qin F.Y., Cao X.,* Zhao X. X., Luo Y. B., Repaka D.V.M., Luo W.B., Suwardi A., Soldi T., Aydemir U., **Huang Y.Z.**, Liu Z., Hippalgaonkar K., Snyder G. J., Xu J.W., Yan Q.Y. (2021). High thermoelectric performance enabled by convergence of nested conduction bands in Pb₇Bi₄Se₁₃ with low thermal conductivity. **Nature Communications**, 12, 4793. doi.org/10.1038/S41467-021-25119-Z **##**
8. Chang S., Zhang Y.,** Zhang B.,* Cao X.,* Zhang L., Huang X., Lu W., Ong C. Y., Yuan S., Li C.,** **Huang Y. Z.**, Zeng K., Li L., Yan W., Ding J. (2021) Conductivity Modulation of 3D-Printed Shellular Electrodes through Embedding Nanocrystalline Intermetallics into Amorphous Matrix for Ultrahigh-Current

- Oxygen Evolution. **Advanced Energy Materials**, 11, 28, 2100968
<https://doi.org/10.1002/aenm.202100968> ##
9. Hu L., Luo Y., Fang Y.W., Qin F., Cao X.,* Xie H., Liu J., Dong J., Sanson A., Giarola M., Tan X., Zheng Y., Suwardi A., **Huang Y.Z.**, Hippalgaonkar K., He J., Zhang W., Xu J., Yan Q., Kanatzidis M. G., (2021). High Thermoelectric Performance through Crystal Symmetry Enhancement in Triply Doped Diamondoid Compound Cu₂SnSe₃. **Advanced Energy Materials**, 11, 42, 2100661 doi.org/10.1002/AENM.202100661 ##
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PAPERS PUBLISHED/PRESENTED IN CONFERENCES/WORKSHOPS

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In-situ TEM observation of phase transformation
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2. **Huang Yizhong** (Oral Presentation)
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4. Junsheng WU, **Yizhong HUANG**, Xiaogang LI (Invited Speaker)
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