He Xueqiu

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BRIEF SUMMARY

Prof. He is a leading scientist in mining safety science and engineering acquiring over 35 years of experience in teaching and research. His research focuses theoretical and technological developments in mining safety science and engineering. Prof. He has been leading numerous major national and international research projects as the Principal Investigator from **National Natural Science Foundation of China (NSFC), Ministry of Science and Technology of China (MOST),** and listed mining and energy companies. He has significantly contributed towards scientific community by supervising over 15 postdoctoral research scholars and over 75 doctorates. He served as the Chair of the International Committee on Mine Safety Science and Engineering (ICMSSE) since 2017. Prof. He has been awarded **over 6 national level science and technology-oriented awards and honors,** over 30 provincial or ministerial level awards and honors. He has published **422 research articles** (167 indexed by Science Citation Index-Expanded, 44 indexed by EI-Compendex, and others indexed by CNKI), **over 20 monographs, over 65 Patents (including 4 US patents).** The **total citation reached 17966 times.** His achievements have been applied in more than 350 mines both domestically and internationally, promoting technological progress in mine safety, with significant safety and economic benefits. Some applied mines increased sales by 19.2 billion RMB year-on-year, with an additional profit of over 6.3 billion RMB.

EDUCATIONAL BACKGROUND

09/1985-06/1990	**Doctorate**, China University of Mining and Technology, **China**.
09/1982-06/1985	**Master**, China University of Mining and Technology, **China**.
09/1979-06/1982	**Bachelor**, Liaoning Technical University, **China**

PROFESSIONAL EXPERIENCE

2015-Present	**Professor, Ph.D. Supervisor**, University of Science and Technology Beijing, China; Distinguished visiting professor and visiting professor, University of Wollongong, Australia (2018, 2023); Guest professor, McGill University, Canada (from 2017). Invited to Australia by ACAR as one of the seven global leading experts in mine dynamic disaster prevention to provide consultation (2019)

2013-2015	Chair, North China Institute of Science and Technology, Hebei, China
2010-2013	Chair, China Academy of Work Safety Science and Technology, Beijing, China
2000-2010	Deputy Director, National Administration of Work Safety, Beijing, China
1996-2000	**Professor, Principal Assistant,** China University of Mining and Technology, Xuzhou, China
1994-1995	**Professor, Postgraduate Division Director**, China University of Mining and Technology, Xuzhou, China
1987-1994	**Assistant Professor,** China University of Mining and Technology, Xuzhou, China
1985-1987	**Teaching Assistant**, China University of Mining and Technology, Xuzhou, China

RESEARCH FIELD

-Mine safety

-Rock/coal dynamic disaster

-Theory/technology/equipment of intelligent monitoring and early warning for mining safety

-Strategic planning and consulting for mine safety development

HONORS & AWARDS

2022	**Science and Technology Award,** the first prize, awarded by China National Coal Association, China
2022	Science and Technology Award, the second prize, awarded by China National Coal Association, China
2020	Science and Technology Award, the second prize, awarded by China Occupational Safety and Health Association, China
2019	Shanxi Science and Technology Award, the second prize, awarded by Government of Shanxi Province
2017	Science and Technology Award, the second prize, awarded by China National Coal Association, China
2014	**Technical Innovation Award**, the second prize, awarded by Ministry of Education of the People's Republic of China
2013	Science and Technology Award, the first prize, awarded by Occupational Safety and Health Association of China
2011	Beijing Science and Technology Award, the first prize, awarded by Government of Beijing
2010	**China Excellent Patent Award**, awarded by the National Intellectual Property Office
2007	**National Science and Technology Award**, the second prize, **awarded by the National Council**
2002	**National Science and Technology Award**, the second prize, **awarded by the National Council**

2002	**College Excellent Textbook Award**, the second prize, awarded by Ministry of Education of the People's Republic of China
2001	Henan Science and Technology Award, the first prize, awarded by Government of Henan Province
2001	China University Science and Technology Award, the second prize, awarded by Ministry of Education of the People's Republic of China
2001	Science and Technology Award, the first prize, awarded by National Coal Association of China
2000	Selected for the **National Talents Project**
1999	Hold the **National Science Fund for Distinguished Young Scholars**
1997	Selected for **the Trans-Century Talents Project**, awarded by Ministry of Coal Industry and Ministry of Education of the People's Republic of China
1996	**Outstanding Middle-aged Experts,** awarded by the National Ministry of Personnel
1994	**Youth Science and Technology**, award by Ministry of Coal Industry
1993	**National Natural Science Award**, the fourth prize, **awarded by the National Council**
1993	Jiangsu Science and Technology Award, the first prize, awarded by Administration of Coal Mine Safety of Jiangsu Province
1993	Hold Special Allowance of the National Council
1993	Henry Fok Foundation Award for College Young Teachers

PROFESSIONAL TITLES & ORGANIZATIONAL ACTIVITIES

2017	**Chair**, the International Committee of Mine Safety Science and Engineering
2014	**Chair**, ZHONG-AN Academy of Industrial Safety Engineering
2008	**Permanent member**, China Coal Society
2019	**Editorial board member**, International Journal of Minerals, Metallurgy and Materials

KEY RESEARCH PROJECTS

2024-2028	**Special Fund for Research on National Major Research Instruments,** Non-contact electromagnetic sensing experimental instrument for coal and rock fracture behavior under load, **Project No: 52327804, funded by NSFC**

2017-2021	**Key Program of NSFC,** Principle and method of rock burst monitoring and early warning by the coupled electromagnetic radiation-vibration, **Project No: 51634001,** funded by **NSFC**
2016-2019	**National Key Research and Development Program of China,** Integration and demonstration of monitoring and early warning technology of typical dynamic disasters in coal mines", **Project No: 2016YFC0801408,** funded by **MOST.**
2012-2015	**National Key Technology Research and Development Program of China,** Dynamic disaster monitoring and early warning technology and engineering demonstration in deep coal mining, **Project No: 2012BAK09B00**, funded by **MOST**
2012-2014	**National Key Technology Research and Development Program of China,** Key technology-equipment and demonstration for typical mine disaster prediction and control, funded by **MOST**
2006-2010	**National Key Technology Research and Development Program of China,** Technology and equipment for multi-parameter identification and monitoring and early warning of coal-rock dynamic disasters in deep coal mining, funded by **MOST**
2005-2010	**National Key Basic Research Program of China (973 Program),** Physical and mechanical characters and constitutive relation of gas-containing coal, **Project No: 2005cb221502**, funded by **MOST**
1999-2002	**National Science Fund for Distinguished Young Scholars,** Electromagnetic effect of impulsive fluid and coal and rock concrete dynamic disaster, **Project No: 59925411,** funded by **NSFC**

TEACHINGS

Undergraduate Teaching at USTB - **Mine Safety Technology and Engineering**
Postgraduate Teaching at USTB - **Monitoring and Warning of Coal and Rock Dynamic Disaster**

SELECTED MONOGRAPHS

1. **He XQ**. (1995) Rheological Dynamics of Coal or Rock Containing Gas, China University of Mining and Technology Press.
2. **He XQ**. (1995) Electromagnetic dynamics of Coal or Rock Containing Gas, China University of Mining and Technology Press.
3. **He XQ**. (2000) Safety Engineering Science, China University of Mining and Technology Press.
4. **He XQ**, Wang EY, NIE BS, et al. (2003) Electromagnetic Dynamics of Coal and Rock Rheology, Science Press.
5. **He XQ**, Zhou XQ (2006) Theory and Technology of Coal Mine Disaster Prevention and Control in China, China University of Mining and Technology Press.
6. **He XQ**, Shen BH, Luo HZ, et al. (2009) The Technology and Engineering Practice of Gas Prevention in Coal Mines, China University of Mining and Technology Press.

7. **He XQ**, Hani Mitri, Nie BS, et al. (2014) Progress in Mine Safety Science and Engineering II, CRC Press.
8. Wang EY, **He XQ**, Li ZH, et al. (2009) Electromagnetic Radiation Technology of Coal and Its Application, Science Press.
9. Nie BS, **He XQ**, Zhu CW, et al. (2016) Effect of Electromagnetic Emission of Rock or Coal Fracture and Its Applications, Science Press.
10. Song DZ, **He XQ**, Wang EY, et al. (2020) Rock burst Evolutionary Process and Energy Dissipation Characteristics, Springer.

SELECTED PEER-REVIEWED PUBLICATIONS

1. **He XQ**, Liu XF, Nie BS, et al. (2017). FTIR and Raman spectroscopy characterization of functional groups in various rank coals. **Fuel**. Volume 206, pp. 555-563.
2. **He XQ**, Liu XF, Song DZ, et al. (2019) Effect of microstructure on electrical property of coal surface. **Applied Surface Science**. Volume 483, pp.713-720
3. **He XQ**, Zhou C, Song DZ, et al. (2021) Mechanism and monitoring and early warning technology for rockburst in coal mines. **International Journal of Minerals Metallurgy and Materials**, Volume 28, Issue 7, pp.1097-1111
4. **He XQ**, Sun XL, Yin S, et al. (2023) Experimental research on magnetic field variation in rock failure process and its significance for earthquake prediction. **Chinese Journal of Geophysics (in Chinese)**, Volume 66, Issue 11, pp.4609-4624
5. **He XQ**, Wei MH, Song DZ*, et al. (2023) New progress in theory and technology of electromagnetic radiation in coal and rock, **Coal Science and Technology**, Volume 51, Issue 1, pp.168-190
6. Li ZL, **He XQ***, Dou LM, et al. (2018) Numerical investigation of load shedding and rock burst reduction effects of top-coal caving mining in thick coal seams. **International Journal of Rock Mechanics and Mining Sciences**, Volume 110, pp.266-78.
7. Li ZL, **He XQ***, Dou LM, et al. (2019) Investigating the mechanism and prevention of coal mine dynamic disasters by using dynamic cyclic loading tests. **Safety science**. Volume 115, pp.215-228.
8. Song DZ, **He XQ***, Wang EY, et al. (2019) A dynamic ejection coal burst model for coalmine roadway collapse. **International Journal of Mining Science and Technology**. Volume 29, Issue 4, pp.557-564.
9. Tian XH, **He XQ***, Song DZ, et al. (2022) AFM characterization of surface mechanical and electrical properties of some common rock. **International Journal of Mining Science and Technology.** Volume 32, Issue 2, pp.435-445.
10. He SQ, **He XQ***, Song DZ, et al. (2022) Multiparameter integrated early warning model and an intelligent identification cloud platform of rock burst. **Journal of China University of Mining and Technology**, Volume 51, Issue 5, pp.850-862.

SELECTED PATENT COOPERATION TREATY (PCT)

1. **He XQ**, Song DZ, He SQ, Li ZL, Wang AH, Mu HW, 2021. Multi-system, multi-parameter, integrated, comprehensive early warning method and system for coal and rock dynamic disaster. **No. US16820751**
2. Song DZ, **He XQ**, Li ZL, Wei MH, Lou Q, Wang AH, 2019. Method of locating coal-rock main fracture by electromagnetic radiation from precursor of coal-rock dynamic disaster. **No. US1634407**
3. Li ZL, **He XQ**, Song DZ, He SQ, Li DH, 2019. Monitoring and forewarning method for coal-rock dynamic disasters based on electromagnetic radiation and earth sound. **No. US16348508**
4. Song DZ, **He XQ**, Wei MH, 2023. Direction-finding and positioning system of electromagnetic emission of coal or rock fracture. **No. US17679137**

SELECTED CHINESE PATENTS

1. **He XQ**, Song DZ, 2018. Electric-seismic coupling monitoring and early warning method for typical dynamic disasters in mines. No. 2016108067189
2. **He XQ**, Song DZ, He SQ, Li ZL, Xue YR, Wang AH, Mu HW, 2020. Multi-system and multi-parameter integrated comprehensive early warning method and system for coal and rock dynamic disaster. No. 2019110479388
3. **He XQ**, Song DZ, Li ZL, Lou Q, Wei MH, 2020. A method for locating of electromagnetic source and forecasting of coal mine dynamic disasters. No. 2017114369621
4. Li ZL, **He XQ**, Song DZ, He SQ, Li DH, 2019. A method for coal-rock dynamic hazards forecasting by using electromagnetic emission and acoustic emission. No. 2019100139587
5. Li ZL, **He XQ**, Song DZ, Lou Q, Wang WX, 2019. A method for locating the source of local fractures of coal and rock masses by combined use of electromagnetic emission and microseismic monitoring. No. 2017109743450
6. Li ZL, **He XQ**, Song DZ, Wang AH, 2019. A method for identification of electromagnetic signals emitted by one same failure of coal and rock masses. No. 2017109745600
7. Song DZ, **He XQ**, Li ZL, Wei MH, Lou Q, Wang AH, 2020. A method for locating main fractures of coal and rock masses using precursory electromagnetic emission. No. 2017110522868
8. Song DZ, **He XQ**, Wei MH, 2021. An EMR direction finding and positioning system for coal and rock damage. No. 202111029429X
9. He SQ, **He XQ**, Song DZ, Li ZL, Cao B, 2022. A method of reducing load and skid to prevent rockburst of large dip coal seam group. No. 2021104999700
10. He SQ, **He XQ**, Song DZ, Li ZL, 2022. A method of roadway support based on dynamic load. No. 2021106043918