

Su-Ying **CHIEN** (簡淑櫻)

Postdoctoral Fellow (2017/2/6 ~ 2017/8/1)

@ Institute of Earth Sciences, Academia Sinica (中研院地科所博士後)



Speciality (專長) : Rock and Mineral Physics (岩石礦物物理)
Institute of Earth Sciences, Academia Sinica (中央研究院 地球科學研究所),
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Research Expertise (研究專長)

1. Material synthesis under extreme conditions (silicate minerals, multi-anvil press)
2. Rheological behaviors of single crystal minerals (stress, Diamond Anvil Cell, Synchrotron)
3. Elastic properties of Silica materials (Ultrasonic velocity, Equation of State)
4. Seismic attenuation of partially molten rocks (energy loss, inverted Forced Torsion Pendulum)
5. Brittle failure of crystal-glass silicates (fluid-saturated rocks, Dynamic Mechanical Analyzer)

Education (學歷)

- Ph.D in Earth Science, University of Cambridge (Cambridge, UK / Oct. 2008 - July 2013)
PROJECT : MECHANICAL PROPERTIES OF SOLID-MELT AND CRYSTAL-GLASS SYSTEMS AT EXTREME CONDITIONS
- BSc, MSc and Ph.D student in Earth Science, National Cheng-Kung University (Tainan, Taiwan / Sept. 1996 - Jan. 2006)
PROJECT : ELASTIC PROPERTIES OF SiO₂ MATERIALS AND MINERAL SYNTHESIS AT EXTREME CONDITIONS

Work & Teaching Experience (工作與教學經驗)

- National Cheng-Kung University (Tainan, Taiwan / Aug. 2017 - present)
Postdoctoral Fellow (博士後研究員) at COLLEGE OF SCIENCE
- Institute of Earth Sciences, Academia Sinica (Nangang, Taiwan / Feb. 2017 - July 2017)
Postdoctoral Fellow (博士後研究員) at EXTREME CONDITIONS LABORATORY
- Center for High Pressure Science & Technology Advanced Research (Changchun, China / Aug. 2014 - Oct. 2016)
Postdoctoral Researcher (博士後研究員) at MATERIALS SYNTHESIS AND CHARACTERIZATION LAB
- Dept. of Earth Sciences, National Cheng-Kung University (Tainan, Taiwan / May 2007 - Aug. 2008)
Assistant Mineral Curator (館藏助理) at GEOLOGY GALLERY
- National Cheng-Kung University (Tainan, Taiwan / Feb. 2006 - Jan. 2007)
Project Assistant (專案助理) at COLLEGE OF SCIENCE

- Part-time teaching

Lecturer : Introduction to Astronomy and The Universe courses (Tainan University of Technology, 2006-2007)

Supervision : Material Science course (Jesus College at University of Cambridge, 2011)

Demonstrator : Geology course, Mineral and Material Science course and Geology field trip to Isle of Arran, Scotland

(Dept. of Earth Science at University of Cambridge, 2008-2011).

Publications (著作發表)

PEER REVIEWED

- Chien, S-Y. (2014) Rheological and Seismic Properties of Solid-Melt Systems : A mechanical spectroscopy study, Springer International Publishing Switzerland 2014, 159 pages, DOI: 10.1007/978-3-319-03098-2. ([pdf](#))
- Hua, F.P.-J., S.-Y. Chien, J. Kung and Y.-B. Wang. (2012) Study materials under extreme conditions - introduction of large volume high-pressure apparatus, Instruments Today, 189 (34:1), 83-91. ([pdf](#))
- Peng, Z, S.-Y. Chien and S.A.T. Redfern. (2012) Dynamic mechanical relaxation and loss in the incommensurate phase of quartz, Journal of Physics: Condensed Matter, 24, 255403, 7 pp. ([pdf](#))
- White, R.S., S.A.T. Redfern and S.-Y. Chien. (2012) Episodicity of seismicity accompanying melt intrusion into the crust, Geophysical Research Letters, 39, L08306. ([pdf](#))

SELECTED CONFERENCE ABSTRACTS

- Chien, S.-Y., S.A.T. Redfern and R.S. White. (2012) Glass transition and crack percolation in basalt: implications for microseismicity, 2012 Annual Congress of Geological Society of Taiwan and Chinese Taipei Geophysical Society, 17-18th May 2012, Taoyuan, Taiwan, Program with abstracts. (Oral)
- Chien, S.-Y., E.K.H. Salje and S.A.T. Redfern. (2010) Microstructure, shear modulus and attenuation in igneous rocks approaching melting at seismic frequencies, 2010 AGU Fall Meeting, 13-17th December 2010, San Francisco, California, USA. (Poster)
- Chien, S.-Y., S.A.T. Redfern, C.-J. Chen and J. Kung. (2010) Lithology, anisotropy, pore pressure and acoustic velocity in fluid-saturated sandstones at pressure, 2010 Western Pacific Geophysics Meeting, 22-25 June 2010, Taipei, Taiwan. (Poster)
- Chien, S.-Y., T. Katsura and S.-C. Yu.(2005) Synthesis of Majoritic garnet (Mj50Py50) at high temperature and high pressure, 2005 Annual Meeting Geological Society of China, 19-21 May 2005, Taipei, Taiwan, Program with abstracts, p. 222. (Poster)
- Chien, S.-Y., E. Huang and S.-C. Yu. (2002) Ultrasonic Measurements in Quartz, 2002 Annual Meeting Geological Society of China, 21-22 March 2002, Tainan, Taiwan, Program with abstracts, p. 151-153. (Oral)