

Ching-Chou Fu Assistant Research Fellow/Professor 傅慶州 助研究員

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研究領域:氣(流)體地球化學、地震觀測

Research domain: Gas/fluid Geochemistry, Earthquake Observations

學歷 Education

- 2006.09 to 2012.07: Ph. D. Department of Geosciences, National Taiwan University (Taiwan)
- 2002.09 to 2006.06: M.S. Department of Geosciences, National Taiwan University (Taiwan)
- 1998.09 to 2002.06: B.S. Department of Geology, Chinese Culture University (Taiwan)

經歷 Experiences

- 2022.02 to 2025.07: Adjunct Assistant Professor, Department of Earth Sciences, National Central University
- <u>2021.07 to 2025.01</u>: Adjunct Assistant Professor, International Graduate Program For Earth System Science, National Taiwan University
- 2018.08 to present: Assistant Research Fellow, Institute of Earth Sciences, Academia Sinica
- 2014.02 to 2018.08: Postdoctoral Fellow, Institute of Earth Sciences, Academia Sinica
- 2014.01 to 2014.01: Postdoctoral Fellow, Institute of Oceanography, National Taiwan University
- 2012.09 to 2013.12: Postdoctoral Fellow, Energy Research Center, National Taiwan University
- 2012.07 to 2012.08: Postdoctoral Fellow, Institute of Oceanography, National Taiwan University
- 2010.09 to 2011.09: Visiting student, National Institute of Geophysics and Volcanology Section of Palermo, Italy

業譽 Selected Awards / Honor

- 2025 Two invited speakers at Japan Geoscience Union 2025 Meeting
- 2024 Invited speaker at American Geophysical Union 2024 Fall Meeting
- 2024 Invited speaker at 8th International Workshop on Earthquake Preparation Process
- 2024 Invited speaker at Japan Geoscience Union 2024 Meeting
- 2023 Excellent Young Scholar Project, NSTC 國科會優秀年輕學者研究計畫 (2023.08-2024.07)
- 2023 Invited speaker at 7th International Workshop on Earthquake Preparation Process
- 2023 Invited speaker at Japan Geoscience Union 2023 Meeting
- 2022 Invited speaker at Taiwan Earthquake Center 6th Annual Meeting
- 2021 Journal TAO 2016-2020 Most Cited Article Award Fu et al. (2017)
- 2020 Excellent Young Scholar Project, MOST 科技部優秀年輕學者研究計畫 (2020.08-2023.07)
- 2019 Invited speaker at 2nd Symposium on Gas Isotope Technique and Geosciences Applications
- 2019 Chinese Academy of Sciences Taiwan Young Talent Programme, Visiting Researcher
- 2019 Invited speaker at 6th International Workshop on Earthquake Preparation Process
- 2018 Keynote speaker at 1st Symposium on Gas Isotope Technique and Geosciences Applications
- 2017 Postdoctoral Research Paper Award from the Ministry of Science and Technology, R.O.C.
- 2017 Invited speaker at Japan Geoscience Union 2017 Meeting

- 2016 Invited speaker at Japan Geoscience Union 2016 Meeting
- 2010 Ph.D. student research aboard fellowship, National Science Council, Taiwan
- 2007 Young Scientist Award from the 9th International Conference of Gas Geochemistry
- 2005 Dean's Award of College of Science, National Taiwan University

研究計畫 Projects

2025/01-2026/12	2025-2026 Mobility Plus Project Proposal between IES And CAS: Integrating 3D contactless positioning systems into a comprehensive geophysical monitoring network in Taiwan (Co-PI)
2024/08-2025/07	Multidimensional monitoring project explores the earthquake generating process associated
2024/00-2023/07	with the Chihshang fault and the Central Range fault
	(PI , NSTC 113-2116-M-001-017-)
2023/10-2024/09	Insight into the volcanic sources and potential impact in Taipei Metropolis (3/3)
2020, 10 202 1, 09	(Co-PI, NSTC 112-2740-M-001-001-)
2023/08-2024/07	Multidimensional active Chihshang fault of geo-inclusive observatory for exploring the
	relationship between the earthquake generating process and deep fluid circulation
	(PI , NSTC 112-2628-M-001-005-)
2022/10-2023/09	Insight into the volcanic sources and potential impact in Taipei Metropolis (2/3)
	(Co-PI, NSTC 111-2740-M-001-001-)
2022/08-2023/10	Origin of alkaline magmas: integrating analytical geochemistry and experimental petrology
	(3/3) (Co-PI, NSTC 111-2116-M-001-031-)
2021/10-2023/03	Insight into the volcanic sources and potential impact in Taipei Metropolis (1/3)
	(Co-PI, MOST 110-2740-M-001-001-)
2021/08-2022/07	Application of geo-chemical techniques to know the characteristics of fluids circulating
	bodies in North East Taiwan and its tectonic significance
2021/09 2022/07	(Co-PI, MOST 110-2116-M-492-003-)
2021/08-2022/07	Origin of alkaline magmas: integrating analytical geochemistry and experimental petrology (2/3) (Co-PI, MOST 110-2116-M-001-030-)
2020/08-2023/12	Imaging the seismic cycle and deep fluid with sophisticatedly equipped earthquake
2020/00-2023/12	observatory (PI , MOST 109-2628-M-001-002-MY3)
2020/08-2021/07	Origin of alkaline magmas: integrating analytical geochemistry and experimental petrology
2020,00 2021,07	(1/3) (Co-PI, MOST 109-2116-M-001-018-)
2020/08-2021/07	Research of Earthquake Precursors in Taiwan: Multidisciplinary Observations and
	Theoretical Model (Co-PI, MOST 109-2116-M-002-031-)
2020/08-2021/07	Geochemical features bodies for origin and interactions of fluids circulating over the North
	East Taiwan and its relationships with the tectonic settings
	(Co-PI, MOST 109-2116-M-492-007-)
2019/06-2021/01	Exploring the characteristics of gas and fluid geochemistry around the active structures and
	its tectonic implications: The region of southwestern Taiwan
	(PI , MOST 108-2116-M-001-024-)

專業經歷/服務 Professional Experience/Services

- 2024.12-present: Member of EMSEV bureau, Electromagnetic Studies of Earthquakes and Volcanoes (EMSEV) https://www.emsev-iugg.org/emsev/index.html
- 2019-present: Professional Committee of Gas Geochemistry, Chinese Society for Mineralogy Petrology and Geochemistry
- 2015-present: Member of International Committee, International Conference of Gas Geochemistry (ICGG)
- 2024 Topic editor (with Drs. Nemesio Perez, Giovanni Martinelli, George Papatheodorou, Yuji Sano, Arndt Schimmelmann, Yunpeng Wang, Heiko Woith, Galip Yüce and Guodong Zheng) New Perspectives and Applications of Gas Geochemistry, International Journal of Earth Sciences
- 2021.08-present: Member of Editorial Board, Review Editor in Frontiers in Earth Science Solid Earth Geophysics
- 2021.11-present: Member of Editorial Board, Review Editor in Frontiers in Earth Science Geohazards and Georisks
- 2023-2026: Director of the 17th board of Chinese Taipei Geophysical Society
- 2023-2025: Director of the 87th board of Geological Society located in Taipei
- 2021-2023: Director of the 86th board of Geological Society located in Taipei
- 2019-2021: Coordinator of Colloquium, Institute of Earth Sciences, Academia Sinica

Reviewer of manuscripts submitted to:

Chemical Geology / Marine and Petroleum Geology / Terrestrial, Atmospheric and Oceanic Sciences (TAO)
 / AGU Geophysical Monograph / Soil Systems / Scientific Reports / Pure and Applied Geophysics / International Journal of Environmental Analytical Chemistry / Geofluids / Proceedings of the Japan Academy, Series B: Physical and Biological Sciences / Frontiers in Earth Science / Journal of Geochemical Exploration / Journal of Asian Earth Sciences / Geochemistry, Geophysics, Geosystems / Earthquake research advances

Reviewer of proposals submitted to:

– Earth Observatory of Singapore (EOS), Singapore / National Science Foundation (NSF), USA / Ministry of Science and Technology (MOST), Taiwan / National Science and Technology Council (NSTC), Taiwan

Organizer of conference/workshop:

- −109 Annual Conference of Chinese Taipei Geophysical Society & Geological Society Located in Taipei, Taipei, 2020
- 5th International Geo-hazards Research Symposium in memory of Prof. Tsanyao Frank Yang, 2016

Session convener in:

- The 1st Symposium on Gas Isotope Technique and Geosciences Applications, Lanzhou, China, August 22-25, 2017, "Applications of stable isotope techniques to the studies of volcanoes and earthquake prediction"
- International Conference in commemoration of 20th Anniversary of the 1999 Chi-Chi Earthquake, Taipei,
 September 15-19, 2019, "Earthquake precursors and forecasting"
- Taiwan Geoscience Assembly, Nangang, May 14-17, 2019, "Geophysics, Exploration Geophysics, and Environmental Geophysics"; "Lithogeochemistry" & "Earthquake Precursors and Observational Seismology"
- 109 Annual Conference of Chinese Taipei Geophysical Society & Geological Society Located in Taipei,
 Taipei, November 17-18, 2020, "M5: Multidimensional Geophysical and Geochemical Observations for Earthquake Generation Process"
- 112 Annual Conference of Chinese Taipei Geophysical Society & Geological Society Located in Taipei,
 Taipei, May 17-18, 2023, "Student poster competition"

Society membership:

Geological Society Located in Taipei (GST) / Chinese Taipei Geophysics Society (CGS) / American Geophysical Union (AGU) / Geochemical Society (GS) / Japan Geoscience Union (JpGU) / Asia Oceania Geosciences Society (AOGS) / Chinese Society for Mineralogy Petrology and Geochemistry (CSMPG)

受邀演講 Invited Talks

- 1. The Japan Geoscience Union Meeting, Chiba, Japan, May 25-30, 2025, M-IS09 session: "The Lithosphere-Atmosphere-Ionosphere coupling process revealed by co-located multidisciplinary precursors prior to the 2022 M6.8 Chihshang Earthquake in Eastern Taiwan"
- 2. The Japan Geoscience Union Meeting, Chiba, Japan, May 25-30, 2025, S-GC37 session: "Persistent crustal CO₂ emissions following the 2022 M6.8 Chihshang earthquake sequence in eastern Taiwan"
- **3.** AGU Fall Meeting 2024, NH31E session: "Preseismic changes in gamma radiation associated with the 2024 M7.2 Hualien Earthquake in eastern Taiwan" (Invited poster)
- 4. National Hsinchu Senior High School, 2024: "大地的氣息-氣體地球化學在地科的應用".
- **5.** Department of Earth and Environmental Sciences, National Chung Cheng University, 2024: "It is "MAGIC" for exploring the earthquake generation process".
- **6.** 8th International Workshop on Earthquake Preparation Process 2024, Chiba, Japan, May 29-30, 2024: "A preliminary result of anomalous change in gamma rays during the 20240403 M7.2 Hualien Earthquake in eastern Taiwan"
- 7. The Japan Geoscience Union Meeting, Chiba, Japan, May 26-31, 2024: "Soil radon and ionospheric TEC anomalies before the 2022 M6.8 Chihshang Earthquake in eastern Taiwan"
- **8.** Institute of Oceanography, National Taiwan University, 2024: "It is "MAGIC" for exploring the earthquake generation process: Current status and future scenarios.".
- **9.** 7th International Workshop on Earthquake Preparation Process 2023, Chiba, Japan, May 24-25, 2023: "Multidimensional Active fault of Geo-Inclusive observatory Chihshang (MAGIC) for exploring the earthquake generating process"
- **10.** The Japan Geoscience Union Meeting, Chiba, Japan, May 21-26, 2023: "Soil gas degassing and hydrogeological changes before and after the 2022 M6.8 Chihshang Earthquake in eastern Taiwan"
- 11. Department of Geology, Chinese Culture University, 2023: "池上斷層多維尺度觀測計畫(MAGIC)探討地震孕震過程之進展".
- **12.** Taiwan Earthquake Center 6th Annual Meeting, 2022: "Multidimensional active fault of geo-inclusive observatory Center- Chihshang (MAGIC-Chihshang)".
- **13.** Material and Chemical Research Laboratories, Industrial Technology Research Institute (Online), 2022: "Advances of gas geochemistry towards earthquake precursor research".
- **14.** Department of Geology, Chinese Culture University, 2020: "Earth's outgoing longwave radiation variability prior to $M \ge 6.0$ earthquakes in the Taiwan area during 2009-2019"
- **15.** The 2nd Symposium on Gas Isotope Technique and Geosciences Applications, Lanzhou, China, September 8-11, 2019: "Exploring the release of radioactive gas in the volcanic area and its tectonic implications"
- **16.** The Lanzhou Center for Oil and Gas Resources, Institute of Geology and Geophysics, CAS. Lanzhou, China, September 13, 2019: "Applications of gas geochemistry in geosciences".
- 17. 6th International Workshop on Earthquake Preparation Process 2019, Chiba, Japan, May 31 to June 1, 2019: "Changes in gas and fluid geochemistry in the Chelungpu fault zone before the 2013 M6.2 Nantou earthquake"
- **18.** The 17th Annual Conference of the Chinese Society for Mineralogy, Petrology and Geochemistry, Zhejiang, Hangzhou, April 19-22, 2019: "Changes in gas and fluid geochemistry at the Taiwan Chelungpu Fault Borehole before the 2013 M6.2 Nantou earthquake"
- **19.** Institute of Oceanography, National Taiwan University, 2018: "Progress in the application of gas geochemistry to earthquake precursor in Taiwan and its future scenarios"
- **20.** The 17th Japan-Taiwan International Workshop on Hydrological and Geochemical Research for Earthquake Prediction, Tsukuba, Japan, September 4, 2018: "Changes in groundwater chemistry at the Taiwan Chelungpu Fault Borehole before the 2013 M6.2 Nantou earthquake"
- **21.** Department of Earth Sciences, National Taiwan Normal University, 2018: "Progress in the application of gas geochemistry to earthquake precursor in Taiwan"
- 22. Institute of Applied Geosciences, National Taiwan Ocean University, 2017: "Observations of fluid and gas geochemistry for earthquake forecasting in Taiwan: Past, recent status and future scenarios"

- 23. The 1st Symposium on Gas Isotope Technique and Geosciences Applications, Lanzhou, China, August 22-25, 2017: "Gas geochemistry applied to earthquake precursor in Taiwan: Recent status and future scenarios" (Keynote Speech)
- **24.** International Workshop on Earthquake Preparation Process 2017, Chiba, Japan, May 25-26, 2017: "Exploring the relationship between soil degassing and seismic activity by continuous radon monitoring in the Longitudinal Valley of eastern Taiwan"
- **25.** The Japan Geoscience Union Meeting, Chiba, Japan, May 20-24, 2017: "Implications of radon and gamma rays in northern Taiwan"
- **26.** The 15th Japan-Taiwan International Workshop on Hydrological and Geochemical Research for Earthquake Prediction, Tsukuba, Japan, September 7, 2016: "Temporal changes in gas geochemistry and gamma rays as a precursor of the 2016 M6.6 Meinong earthquake, southern Taiwan"
- **27.** International Workshop on Earthquake Preparation Process 2016, Chiba, Japan, May 27-28, 2016: "Precursory gas geochemical and hydrogeological anomalies associated with the M6.2 Earthquake of 27 March 2013 in central Taiwan"
- **28.** The Japan Geoscience Union Meeting, Chiba, Japan, May 22-26, 2016: "Precursory gas geochemical and gamma rays anomalies prior to the 2016 M6.4 Meinong earthquake, southern Taiwan"
- **29.** Department of Earth Sciences, National Central University, 2016: "Fluids geochemistry for seismic precursory study in Taiwan"
- **30.** 2016 International mini Workshop on Earthquake Precursors, Taiwan, January 20-21, 2016: "Radon and gamma rays anomalies observed in northern Taiwan: a possible connection with the seismicity near the subduction zone"
- **31.** Department of Geology, Chinese Culture University, 2014: "Soil gas geochemistry for seismic precursory study in Taiwan"

著作 Publications

Journal articles

Publication track: **WoS** – 41 Documents; h-index = 22; Total citations = 1386x

(10 May 2025) Scopus – 44 Documents; h-index = 23; Total citations = 1613x

Google Scholar – h-index = 23; i10-index = 27; Total citations = 1924x

Researcher ID: P-7819-2018, ORCID: 0000-0002-5368-2899, Scopus Author ID: 9239351500

- Corresponding author (*)
- My first author/corresponding author are highlighted in blue
- **46.** Fu, C.C.*, Mu, C.H., Kuo-Chen, H., Wang, P.L., Lin, L.H., Walia, V., Chen, K.H., and Wu, K.W. (2025) Geochemical characteristics and origins of CO₂ emissions within the tectonic collision boundary of the Chihshang fault, eastern Taiwan. *Geoscience Letters*, 12, 23. https://doi.org/10.1186/s40562-025-00395-5
- 45. Chowdhury, S., Walia, V.*, Lin, S.J., <u>Fu, C.C.</u> and Lee, H.F. (2025) Non-linear analysis of soil ²²²Rn time series recorded at Jiaosi in north-east Taiwan for possible earthquake precursor study. *Environmental Earth Sciences*, 84, 77. https://doi.org/10.1007/s12665-025-12100-y
- **44.** <u>Fu, C.C.</u>*, Jhuang, H.K., Ho, Y.Y., Tsai, T.C., Lee, L.C., Lin, C.H., Lin, C.R., Walia, V., and Lee, I.T. (2025) A study of lithosphere-ionosphere seismic precursors from detecting gamma-ray and total electron content anomalies prior to the 2018 ML6.2 Hualien earthquake in eastern Taiwan. *Remote Sensing*, 17(2), 188. https://doi.org/10.3390/rs17020188
- **43.** Dang, M.Q., Hsu, F.H., Su, C.C.*, Wang, S.J.*, <u>Fu, C.C.</u>*, and Lin, I.T. (2025) Investigation of seasonal variations in submarine groundwater discharge using radium isotopes under drought conditions in northwestern coastal Taiwan. *Journal of Hydrology*, 649, 132450. https://doi.org/10.1016/j.jhydrol.2024.132450
- 42. Sun, W.F., Pan, S.Y., Huang, C.M., Guan, Z.K., Yen, I.C., Ho, C.W., Chi, T.C., Ku, C.S., Huang, B.S., <u>Fu, C.C.</u>, and Kuo-Chen, H.* (2024) Deep learning-based earthquake catalog reveals the seismogenic structures of the 2022 M_W 6.9 Chihshang earthquake sequence. *Terrestrial, Atmospheric and Oceanic Sciences*, 35, 5. https://doi.org/10.1007/s44195-024-00063-9

- 41. Dang, M.Q., Wang, S.J.*, <u>Fu, C.C.</u>, and Truong, H.D. (2024) Coastal flowing artesian wells and submarine groundwater discharge driven by tidal variation at TaiCOAST site in Taoyuan, Taiwan. *Journal of Hydrology: Regional Studies*, 52, 101708. <u>https://doi.org/10.1016/j.ejrh.2024.101708</u>
- 40. Walia, V.*, Kumar, A., Chowdhury, S. Lin, S.J., Lee, H.F., and **Fu, C.C.** (2023) Earthquake precursory study using decomposition technique: time series soil radon monitoring data from the San-Jie Station in Northern Taiwan. *Journal of Radioanalytical and Nuclear Chemistry*. https://doi.org/10.1007/s10967-023-09187-7
- 39. Walia, V.*, Kumar, A., and <u>Fu, C.C.</u> (2023) Radon time series data for earthquake precursory studies in Taiwan: An overview. In: Sandeep, Kumar, P., Mittal, H., Kumar, R. (eds) *Geohazards. Advances in Natural and Technological Hazards Research*, 53. Springer, Singapore. https://doi.org/10.1007/978-981-99-3955-8_8
- 38. Ma, Y., Ma, X.X.*, Zhang, L., Xu, W., Li, X.Y., Lu, C.S., **Fu, C.C.**, and Zheng, G.D.* (2022) Geochemical characteristics of geofluids in the Baiyanggou mud volcano group in the southern margin of the Junggar Basin. *GEOCHIMICA*, 51(4), 492-502. 10.19700/j.0379-1726.2022.04.011 (in Chinese with English abstract)
- 37. Tsai, T.C., Jhuang, H.K.*, Ho, Y.Y., Lee, L.C.*, Su, W.C., Hung, S.L., Lee, K.H., <u>Fu, C.C.</u>, Lin, H.C., and Kuo, C.L. (2022) Deep learning of detecting ionospheric precursors associated with M ≥ 6.0 earthquakes in Taiwan. Earth and Space Science, 9(9), e2022EA002289 https://doi.org/10.1029/2022EA002289
- 36. Wang, X., Zheng, G.D.*, Ma, X.X., Fortin, D., <u>Fu, C.C.</u>, Li, Q., Chelnokov, G.A., and Ershov, V. (2022) Chemical and isotopic features of seepage gas from mud volcanoes in southern margin of the Junggar Basin, NW China. *Applied Geochemistry*, 136, 105145. https://doi.org/10.1016/j.apgeochem.2021.105145
- 35. Kumar, A., Walia, V.*, Lin, S.J., and <u>Fu, C.C.</u> (2021) Radon monitoring in artesian wells at Mato-san area of south Taiwan for mud eruption studies. *Journal of the Geological Society of India*, 97, 1590-1592. https://doi.org/10.1007/s12594-021-1917-6
- 34. Kumar, A., Walia, V.*, Mogili, S., and <u>Fu, C.C.</u> (2021) Improved semi-automatic approach to count the tracks on LR-115 film for monitoring of radioactive elements. *Applied Radiation and Isotopes*, 176, 109863. https://doi.org/10.1016/j.apradiso.2021.109863
- **33.** <u>Fu, C.C.</u>*, Lai, C.W., Yang, T.F., Hilton, D.R., Chen, C.H., Walia, V., Kumar, A., and Lee, L.C. (2021) An automatic system for continuous monitoring and sampling of groundwater geochemistry in earthquake-prone regions of SW Taiwan. *Frontiers in Earth Science*, 9:635913. https://doi.org/10.3389/feart.2021.635913
- 32. Dhar, S., Randhawa, S.S., Kumar, A.*, Walia, V.*, <u>Fu, C.C.</u>, Bharti, H., and Kumar, A. (2021) Decomposition of continuous soil–gas radon time series data observed at Dharamshala region of NW Himalayas, India for seismic studies. *Journal of Radioanalytical and Nuclear Chemistry*, 327, 1019-1035 https://doi.org/10.1007/s10967-020-07575-x
- **31.** <u>Fu, C.C.</u>*, Lee, L.C., Ouzounov, D., and Jan, J.C. (2020) Earth's outgoing longwave radiation variability prior to M ≥ 6.0 earthquakes in the Taiwan area during 2009-2019. *Frontiers in Earth Science*, 8:364. https://doi.org/10.3389/feart.2020.00364
- 30. Kumar, A., Walia, V.*, Lin, S.J., and Fu, C.C. (2020) Real-time database for geochemical earthquake precursory research. *Natural Hazards*, 104, 1359-1369. https://doi.org/10.1007/s11069-020-04220-4
- 29. Walia, V.*, Kumar, A., <u>Fu, C.C.</u>, Hong, W.L., and Yang, T.F., (2020) Study of fault traces in Taiwan using soil-gas geochemistry: An overview. *Radon: Detection, Exposure and Control, NOVA SCIENCE PUBLISHERS*. 45-78.
- **28.** Fu, C.C.*, Lee, L.C., Yang, T.F., Lin, C.H., Chen, C.H., Walia, V., Liu, T.K., Ouzounov, D., Giuliani, G., Lai, T.H., and Wang, P.K. (2019) Gamma ray and radon anomalies in northern Taiwan as a possible preearthquake indicator around the plate boundary. *Geofluids*, 2019, 4734513, 14 pages. doi.org/10.1155/2019/4734513

- 27. Kumar, A., Walia, V.*, Sung, Y.C., Lin, S.J., <u>Fu, C.C.</u>, and Wen, K.L. (2018) Soil gas survey in and around Shanchiao fault of northern Taiwan for establishing continuous monitoring station. *Acta Geophysica*, 66(5), 1213-1221. https://doi.org/10.1007/s11600-018-0133-2
- 26. Kumar, A., Walia, V.*, Sung, Y.C., Lin, S.J., Lee, H.F., Lin, C.H., <u>Fu, C.C.</u>, and Chen, C-H. (2018) Integrated radon monitoring in Tatun Volcanic Areas of Northern Taiwan. *Terrestrial, Atmospheric and Oceanic Sciences*, 29(3), 1-13. https://doi.org/10.3319/TAO.2017.10.06.02
- **25.** <u>Fu, C.C.</u>* and L.C. Lee, (2018) Continuous monitoring of fluid and gas geochemistry for seismic study in Taiwan. Pre-Earthquake Processes: A Multidisciplinary Approach to Earthquake Prediction Studies, *Geophysical Monograph Series*, 234, 199-218. https://doi.org/10.1002/9781119156949.ch11
- 24. Arora, B.R., Kumar, A., Walia, V.*, Yang, T.F., <u>Fu, C.C.</u>, Liu, T.K., Wen, K-L., and Chen, C-H. (2017) Assessment of the Response of the Meteorological/hydrological parameters on the soil gas radon emission at Hsinchu, northern Taiwan: A prerequisite to identify earthquake precursors. *Journal of Asian Earth Sciences*, 149, 49-63. https://doi.org/10.1016/j.jseaes.2017.06.033
- **23.** Fu, C.C., Walia, V.*, Yang, T.F., Lee, L.C., Liu, T.K., Chen, C.H., Kumar, A., Lai, T.H., and Wen, K.L. (2017) Preseismic anomalies in soil-gas radon associated with 2016 M6.6 Meinong earthquake, Southern Taiwan. *Terrestrial, Atmospheric and Oceanic Sciences*, 28(5), 787-798. https://doi.org/10.3319/TAO.2017.03.22.01
- **22.** <u>Fu, C.C.</u>*, Yang, T.F., Chen, C.H., Lee, L.C., Wu, Y.M., Liu, T.K., Walia, V., Kumar, A., and Lai, T.H. (2017) Spatial and temporal anomalies of soil gas in northern Taiwan and its tectonic and seismic implications. *Journal of Asian Earth Sciences*, 149, 64-77. https://doi.org/10.1016/j.jseaes.2017.02.032
- **21.** Yuce, G., <u>Fu, C.C.</u>*, D'Alessandro, W., Gulbay, A.H., Lai, C.W., Bellomo, S., Yang, T.F., Italiano, F., and Walia, V. (2017) Geochemical characteristics of soil radon and carbon dioxide within the Dead Sea Fault and Karasu Fault in the Amik Basin (Hatay), Turkey. *Chemical Geology*, 469, 129-146. dx.doi.org/10.1016/j.chemgeo.2017.01.003
- **20.** <u>Fu, C.C.</u>*, Yang, T.F., Tsai, M.C., Lee, L.C., Liu, T.K., Walia, V., Chen, C.H., Chang, W.Y., Kumar, A., and Lai, T.H. (2017) Exploring the relationship between soil degassing and seismic activity by continuous radon monitoring in the Longitudinal Valley of eastern Taiwan. *Chemical Geology*, 469, 163-175. dx.doi.org/10.1016/j.chemgeo.2016.12.042
- 19. Kumar, A., Walia, V.*, Yang, T.F., <u>Fu, C.C.</u>, Singh, S., Bajwa, B.S., and Arora V. (2016) Soil ²²²Rn concentration, CO₂ and CH₄ flux measurements around the Jwalamukhi area of north-west Himalayas, India. *Radiation Protection Dosimetry*, 1-5. https://doi.org/10.1093/rpd/ncw071
- 18. Kumar, A., Walia, V.*, Arora, B.R., Yang, T.F., Lin, S.J., <u>Fu, C.C.</u>, Chen, C.-H., and Wen, K.L. (2015) Identifications and removal of diurnal and semidiurnal variations in radon time series data of Hsinhua monitoring station in SW Taiwan using singular spectrum analysis. *Natural Hazards*, 79,317-330. https://doi.org/10.1007/s11069-015-1844-1
- **17.** <u>Fu, C.C.</u>, Wang, P.K., Lee, L.C.*, Lin, C.H., Chang, W.Y., Giuliani G., and Ouzounov, D. (2015) Temporal variation of gamma rays as a possible precursor of earthquake in the Longitudinal Valley of eastern Taiwan. *Journal of Asian Earth Sciences*, 114(2), 362-372. https://doi.org/10.1016/j.jseaes.2015.04.035
- 16. Yuce, G., Italiano, F.*, D'Alessandro W., Yalcin, T.H., Yasin, D.U., Gulbay, A.H., Ozyurt, N.N., Rojay, B., Karabacak, V., Bellomo, S., Brusca, L., Yang, T.F., **Fu, C.C.**, Lai, C.W., Ozacar, A., and Walia, V. (2014) Origin and interactions of fluids circulating over the Amik Basin (Hatay-Turkey) and relationships with the hydrologic, geologic and tectonic settings. *Chemical Geology*, 388, 23-39. https://doi.org/10.1016/j.chemgeo.2014.09.006
- 15. Walia, V.*, Yang, T.F., Lin, S.-J., Kumar, A., <u>Fu, C.C.</u>, Chiu, J.-M., Chang, H.-H., Wen, K.-L., and Chen, C-H. (2013) Temporal variation of soil gas compositions for earthquake surveillance in Taiwan. *Radiation Measurements*, 50, 154-159. https://doi.org/10.1016/j.radmeas.2012.11.007

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