

# Curriculum Vitae

## Zeng-Yei HSEU

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### I. PERSONAL INFORMATION

#### Zeng-Yei HSEU

Professor of Pedology and  
Soil Environmental Quality  
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### II. EDUCATIONAL AND CERTIFICATION

- Ph.D. Div. of Soils and Plant Nutrition, Graduate Institute of Agricultural Chemistry, National Taiwan University, Taipei, Taiwan, June, 1997.

### III. PROFESSIONAL EXPERIENCE/EMPLOYMENT

- Professor of pedology and soil environmental quality, Department of Agricultural Chemistry, National Taiwan University. (August 2015 to present).
- Department Head, Department of Environmental Science and Engineering, National Pingtung University of Science and Technology, Taiwan (August, 2013 to July, 2015).
- Guest Professor, School of Agriculture, Meiji University, Tokyo, Japan (2011).
- Guest Professor, School of Agriculture, Kyoto University, Kyoto, Japan (2010).
- Professor, Department of Environmental Science and Engineering, National Pingtung University of Science and Technology, Taiwan (August, 2006 to July, 2015).
- Associate Professor, Department of Environmental Science and Engineering, National Pingtung University of Science and Technology, Taiwan (August, 2003 to July, 2006).
- Assistant Professor, Department of Environmental Science and Engineering, National Pingtung University of Science and Technology, Taiwan (August, 2000 to July, 2003).

### IV. Academic Awards

- International Honorable Green Technology advisor, Rural Development Agency, Korea (2009-2012)
- Publication Award, Chinese Society of Soil and Fertilizer in Taiwan (2003 and 2012)
- Award of Outstanding Contribution in Reviewing, Journal of Environmental Management (2015)
- Science Research Award (2000-2019), Ministry of Science and Technology (MOST), Taiwan.

### V. Special Academic Honors (*Invited speaker of International Conference*)

1. **Hseu\*, Z.Y.**, C.C. Huang, P.H. Kao, S.T. Yuan, Y.N. Chang., and M.T. Liao. 2017. Experiences of sludge application on soil quality and crop growth in Taiwan. *The 2<sup>nd</sup> International Conference on Biological Waste as Resource*. May 24-28, Hong Kong, China.
2. **Hseu\*, Z.Y.**, and Y.T. Chang. 2016. Effects of biochar and poultry litter co-compost on *Arbuscular mycorrhizae* for the growth of water spinach. *Asia Pacific Biochar Conference 2016*. Oct. 21-24, Chuncheon, Korea.

3. **Hseu\*, Z.Y.**, T. Watanabe, A. Nakao, F. Zehetner, K. Fujii, and Y.S. Ok. 2014. Chromium and nickel dynamics in serpentine soils and potential risk in the environment. P109. In Abstract Proceedings of **2<sup>nd</sup> International Conference on Contaminated Land, Ecological Assessment and Remediation**, Oct. 5-8, Chuncheon, Korea.
4. **Hseu\*, Z.Y.** and Z.S. Chen 2012. Effects of Soil Properties on Heavy Metals Uptake of Crops and the Evaluation of Metal Regulation in the Crops. **International Conference of Risk Factor Monitoring of Heavy Metals in Food**. 16 Nov. 2012. Taipei, Taiwan.
5. **Hseu\*, Z.Y.**, S.H. Jien, S.H. Wang, and H.W. Deng. 2012. Phytoextraction of cadmium by water spinach enhanced by EDDS and NTA from soil. **The 1st International Conference on Contaminated Land, Ecological Assessment and Remediation (CLEAR 2012)**. 5-7 Nov., 2012. Zhejiang A & F University, Lin'an, China.
6. **Hseu\*, Z.Y.**, S.H. Jien, H.Y. Guo, C.C. Tsai, and Z.S. Chen. 2010. Organic carbon storage and management strategies of the rural soils on the basis of soil information system in Taiwan. P. 125-137. Proceedings of **International Workshop on Evaluation and Sustainable Management of Soil Carbon Sequestration in Asian Countries**. Sep 27 to Oct 2, 2010, Bogor, Indonesia.
7. Guo, H.Y., **Z.Y. Hseu\***, Z.S. Chen, C.C. Tsai, and S.H. Jien. 2009. Integrating Soil Information System with Agro-environmental Application in Taiwan. Extended abstract proceedings of **9<sup>th</sup> International Conference of the East and Southeast Asia Federation of Soil Science Societies**. Oct. 27-30 2009, Seoul, Korea.
8. **Hseu\*, Z.Y.**, Z.S. Chen and S.H. Jien. 2006. Pedological characteristics and contamination of heavy metals in rice production of the paddy soils in Taiwan. **Frontiers in Rice Science: from Gene to Field**. Tohoku University, Sendai, Japan. Nov. 6-8, 2006.

## **VII. Field of Professional Experts**

- Soil remediation techniques on cultivated soils contaminated by heavy metals, especially on phytoremediation of trace elements.
- Soil Morphology, pedogenic processes, and classification
- Biogeochemistry of serpentine soils, especially on Cr and Ni fate in soil-plant interactions

## **VIII. Academic services**

- President, Chinese Society of Soil and Fertilizer Sciences in Taiwan (2016-2017)
- Secretary general, 3<sup>rd</sup> International Conference of Contaminated Land, Ecological assessment, and remediation (CLEAR 2016 in Taipei)
- Member of Editorial Board and Advisory Panels, Terrestrial and Aquatic Environmental Toxicology, ISSN 1749-0324 (2007-present)
- Member of Editorial Board, Scientifica (Hindawi Publishing Corporation) (2012-present)
- Member of Editorial Board of Advances in Agriculture and Food Systems (AAFS) Journal (2015-present)

## **X. PUBLICATIONS (in 5 years)**

1. **Hseu\*, Z.Y.** and Y.J. Lai. 2017. Nickel accumulation in paddy rice on serpentine soils containing high geogenic nickel contents in Taiwan. Environmental Geochemistry and Health (In press) doi:10.1007/s10653-017-9925-6 **SCI**
2. Huang, W. S., S. H. Jien, S. T. Huang, H. Tsai\*, and **Z.Y. Hseu**. 2017. Pedogenesis of red soils overlaid coral reef terraces in the Southern Taiwan. Quaternary International (In press) <http://dx.doi.org/10.1016/j.quaint.2016.09.064>, **SCI**
3. Schomakers, J., S.H. Jien\*, T.Y. Lee, J.C. Huang, **Z.Y. Hseu**, Z.L. Lin, L.C. Lee, T. Hein, A. Mentler, and F. Zehetner. 2017. Soil and biomass carbon re-accumulation after landslide disturbances. Geomorphology 288:164-174. **SCI**
4. Chien\*, L.C., M.C. Tsou, H.C. Hsi, P. Beamer, Karen Bradham, **Z.Y. Hseu**, S.H. Jien, C.B. Jiang, W. Dang, and H. Özkaynak. 2017. Soil ingestion rates for children under 3 years old in Taiwan. Journal of Exposure Science and Environmental Epidemiology 27:33-40.

5. Bandara, T., I. Herath, P. Kumarathilaka, **Z.Y. Hseu**, Y.S. Ok, and M. Vithanage\*. 2017. Efficacy of woody biomass and biochar for alleviating heavy metal bioavailability in serpentine soil. *Environmental Geochemistry and Health* 39:391-401. **SCI**
6. **Hseu\***, **Z.Y.**, Y.C. Su, F. Zehetner, and H.C. Hsi. 2017. Leaching potential of geogenic nickel in serpentine soils from Taiwan and Austria. *Journal of Environmental Management* 186:151-157. **SCI**
7. **Hseu Z.Y.**, and Z.S. Chen\*. 2016. Experiences of mass pig carcass disposal related to groundwater quality monitoring in Taiwan. *Sustainability* 9(1), 46; doi:[10.3390/su9010046](https://doi.org/10.3390/su9010046) **SCI**
8. Chen, T.C., **Z.Y. Hseu\***, J.S. Jean, and M.L. Chou. 2016. Association between arsenic and different-sized dissolved organic matter in the groundwater of black-foot disease area, Taiwan. *Chemosphere* 159:214-220. **SCI**
9. Chou, M.L., J.S. Jean\*, C.M. Yang, **Z.Y. Hseu**, Y.H. Chen, H.L. Wang, S. Das., and L.S. Chou. 2016. Inhibition of ethylenediaminetetraacetic acid ferric sodium salt (EDTA-Fe) and calcium peroxide (CaO<sub>2</sub>) on arsenic uptake by 2 vegetables in arsenic-rich agricultural soil. *Journal of Geochemical Exploration*. 163:19-27. **SCI**
10. Chou, M. L., J. S. Jean\*, G. X. Sun, C. M. Yang, **Z. Y. Hseu**, S. F. Kuo, H. Y. Tseng, and Y. J. Yang. 2016. Irrigation practices on rice crop production in arsenic-rich paddy soil. *Crop science* 56:422-431. **SCI**
11. Tsai\*, H., **Z.Y. Hseu**, H.Y. Kuo, W.S. Huang, and Z.S. Chen. 2016. Soilscape of west-central Taiwan: Its pedogenesis and geomorphic implications. *Geomorphology* 255:81-94. **SCI**
12. Huang, W.S., S.H. Jien, H. Tsai\*, **Z.Y. Hseu**, and S.T. Huang. 2016. Soil evolution in a tropical climate: An example from a chronosequence on marine terraces in Taiwan. *Catena* 106:945-951. **SCI**
13. **Hseu\***, **Z.Y.**, Watanabe, T., Nakao, A., and Funakawa, S. 2016. Partition of geogenic nickel in paddy soils derived from serpentinites. *Paddy and Water Environment* 14(3):417-426. **SCI**
14. Chien\*, L.C., M.C. Tsou, H.C. Hsi, P. Beamer, Karen Bradham, **Z.Y. Hseu**, S.H. Jien, C.B. Jiang, W. Dang, and H. Özkaynak. 2015. Soil ingestion rates for children under 3 years old in Taiwan. *Journal of Exposure Science and Environmental Epidemiology*. doi:10.1038/jes.2015.61. **SCI**
15. **Hseu\***, **Z.Y.**, F. Zehetner, F. Ottner, and Y. Iizuka. 2015. Clay mineral transformations and heavy metal release in paddy soils formed on serpentinites in eastern Taiwan. *Clays and Clay Minerals* 63:119-131. **SCI**
16. Jien, S. H., M. H. Lee, **Z. Y. Hseu**, and H. H. Wang. 2015. Erosion potential estimation by network measurement of soil properties in coastal areas after clearcutting. *International Journal of Distributed Sensor Networks*. Vol 2015 Article No. 3 (1-3 p). **EI**
17. **Hseu, Z.Y.**, S.H. Jien\*, W.S. Chien, and R.C. Liou. 2014. Impacts of biochar on physical properties and erosion potential of a mudstone slopeland soil. *The Scientific world Journal* Volume 2014, Article ID 602197, 10 pages. **SCI**
18. Chang, Y.T., **Z.Y. Hseu\***, and F. Zehetner. 2014. Evaluation of phytoavailability of heavy metals to Chinese cabbage (*Brassica chinensis* L.) in rural soils. *The Scientific world Journal* Volume 2014, Article ID 309396, 10 pages. **SCI**
19. Chou, M.L., J.S. Jean\*, G.X. Sun, **Z.Y. Hseu**, C.M. Yang, S. Das, and J.H. Teng. 2014. Distribution and accumulation of arsenic in rice plants grown in arsenic-rich agricultural soil. *Agronomy Journal* 106:945-951. **SCI**
20. Yang\*, C.P., C.Y. Hsieh, and **Z.Y. Hseu**. 2014. Fate of heavy metals and evaluation of eutrophication in a wetland–reservoir system. *Water Environment Research* 86(4):331-339. **SCI**
21. **Hseu, Z.Y.**, Y.T. Huang, and H.C. Hsi\*. 2014. Effects of remediation train sequence on decontamination of heavy metal-contaminated soil containing mercury. *Journal of the Air & Waste Association* 64:1013-1020. **SCI**
22. Tsai\*, C.C., Y.F. Chang, G.S. Hwang, and **Z.Y. Hseu**. 2014. Impact of Wood biochar addition on nutrient leaching and fertility in a rural Ultisol of Taiwan. *Taiwanese Journal of Agricultural Chemistry and Food Science* 51(2):80-93.
23. Chang, Y.T., **Z.Y. Hseu\***, Y. Iizuka, and C.D Yu. 2013. Morphology, geochemistry, and mineralogy of serpentine soils under the tropical forest in southeastern Taiwan. *Taiwan Journal of Forest Science* 28(4):185-201. **EI**
24. Chang, Y.T., H.C. Hsi, **Z.Y. Hseu\***, and S.L. Jheng. 2013. Chemical stabilization of cadmium in acidic soil

using alkaline agronomic and industrial byproducts. *Journal of Environmental Science and Health, Part A: Toxic/Hazardous Substances and Environmental Engineering* 48:1748-1759. **SCI**

25. **Hseu\*, Z.Y.**, and Y. Iizuka. 2013. Pedogeochemical characteristics of chromite in a paddy soil derived from serpentinites. *Geoderma* 202-203:126-133. **SCI**
26. **Hseu, Z.Y.**, H.C. Hsi\*, J.S. Syu, and L.C. Wang. 2013. Development of porous template carbons from montmorillonite clays and evaluation of their toluene adsorption behaviors. *Aerosol and Air Quality Research* 13:1779-1789. **SCI**
27. Ho, C.P., **Z.Y. Hseu\***, Y. Iizuka, and S.H. Jien. 2013. Chromium speciation associated with iron and manganese oxides in serpentine mine tailings. *Environmental Engineering Science* 30(5):241-247. **SCI**
28. **Hseu\*, Z.Y.**, S.H. Jien, S.H. Wang, and H.W. Deng. 2013. Using EDDS and NTA for enhanced phytoextraction of Cd by water spinach. *Journal of Environmental Management* 117:58-64. **SCI**
29. Ho, C.P., **Z.Y. Hseu\***, N.C. Chen, and C.C. Tsai. 2013. Evaluating heavy metal concentration of plants on a serpentine site for phytoremediation applications. *Environmental Earth Science* 70:191-199. **SCI**
30. Hsu, W.M., **Z.Y. Hseu**, and S.H. Jien\*. 2013. The effects of pine bark compost on the distribution of Cd and Pb in organic fractions over time in contaminated soils. *Journal of Hazardous, Toxic, and Radioactive Waste* 17(1):38-44. **EI**