Yu-Wen Chen

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Education

National Taiwan University Taipei, Taiwan
MS in Chemistry, Analytical Chemistry Division (GPA 4.04/4.3) Aug. 2016 - Jul. 2018

- Dissertation: "Quantitation of Glucose Using Cu_2O/Ag Nanoparticles Probe with a Smartphone-Controlled Portable Device"
- Advisor: Dr. Huan-Tsung Chang
- Publicating 4 peer-reviewed papers with one as the first author
- Assisted in reviewing eight peer-review papers

BS in Chemistry (GPA: 4.02/4.3 with ranking 6/76) Aug. 2012 - Jun. 2016

- Received Academic Excellence Award (top 5%) during the first year of study at National Taiwan Normal University (2012); transferred to and finished the study at National Taiwan University (2013-2016)
- Chemistry Major GPA: 4.00/4.3
- Minor in Atmospheric Science, related GPA: 4.16/4.3 (23 credits)

Work

Research Center of Environmental Changes, Academia Sinica Taipei, Taiwan
Research Assistant Jan. 2019 - Present

- Worked with Dr. Yi-Chun Chen (expertise in aerosol-cloud interaction)
- Assisted two cooperation research projects:
  (1) "Effect of Megacities on the transport and transformation of pollutants on the Regional and Global scales over Asia (EMeRGe-Asia)" project, led by University Bremen, Germany, and collaborated with Academia Sinica, Taiwan
    - Analyzed aircraft-based observation data and compared them with ground measurements and model results using Python to investigated near surface chemical reactions of pollutants
    - Investigated near surface chemical reactions of pollutants
    - Proficient with Network Common Data Form (NETCDF)
  (2) "Tracer distribution simulation in western Taiwan using high-resolution Taiwan Vector Vorticity Model" project, collaborated with Department of Atmospheric Science, National Taiwan University
    - Analyzed simulation results and evaluated the impact on target regions with supercomputers
    - Inspected ground observation data to identify the pollution patterns of target regions
- More information about my research work can be found in mywebsite.yuwenchen.tw/research

Publications

- **Chen, Y.-W.**; Periasamy, A. P.; Chang, H.-T.; Chen, C.-F. Quantification of glucose via in situ growth of Cu_2O/Ag nanoparticles. Sens. Actuator B-Chem. 2019, 285, 224-231.
- Periasamy, A. P., Sriram, P., **Chen, Y.-W.**, Wu, C.-W., Yen, T.-J., Chang, H.-T. Porous aluminum electrodes with 3D channels and zig-zag edges for efficient hydrogen evolution. Chem. Commun. 2019, 55, 5447-5450.
- Ravindranath, R.; Periasamy, A. P.; Roy, P.; **Chen, Y.-W.**; Chang, H.-T. Smart app-based on-field colorimetric quantification of mercury via analyte-induced enhancement of the photocatalytic activity of TiO_2–Au nanospheres. Anal Bioanal Chem. 2018, 410, 4555-4564.
- Ravindranath, R.; Roy, P.; Periasamy, A. P.; **Chen, Y.-W.**; Liang, C. T.; Chang, H. T. Fe_2O_3/Al_2O_3 microboxes for efficient removal of heavy metal ions. New J. Chem. 2017, 41, 7751-7757.

Research Experience

18th Asian Chemical Congress Taipei, Taiwan
Poster Presenter Dec. 2019
- Title: "Intercomparison of aircraft and ground based measurements of pollutants and aerosols near major pollution sources over Taiwan"

Analytical Chemistry Technology Conference Keelung, Taiwan
Oral Presenter Jun. 2018
- Title: "Quantitation of glucose through its manipulation of the growth of Cu_2O/Ag nanoparticles"

International Chemistry Workshop, Kanagawa University Kanagawa, Japan
Delegate Aug. 2014
- Studied the latest techniques of polymer chemistry
- Organized sharing session of 30 members from Japan and Taiwan

Leadership

National Taiwan University Taipei, Taiwan
Research Instructor 2016 - 2018
- Instructed three high school students for their science affair project to receive Advanced Honor in Young Scientists Development Program

Teaching Assistant, Analytical Chemistry Lecture and Experiment 2016 - 2017
- Assisted in general affairs for 160 undergraduate students
- Led weekly lecture review and discussion for study groups
- Guided laboratory experiments by providing lectures and oversaw the experiment process
- Earned 4.04/5 in the academic affairs performances appraisal
- Received Teaching Excellence Award

Taiwan Youth Climate Coalition Taipei, Taiwan
Volunteer 2018 - Present
- Conducted global research on climate adaptation policies and offered advice on CO_2 reduction policy to the Taiwan government

Blockore (A start-up company offering blockchain education service) Taipei, Taiwan
Co-founder 2019 - Present
- Won NTU GARAGE start-up funding program (20,000 USD); built up business model

Military Service Yilan, Taiwan
Army Private Aug. 2018 - Dec. 2018
- Improved logistics supplying efficiency in military exercises

National Taiwan University Wind Band Taipei, Taiwan
President, Flute and Piccolo Player 2015-2016
- Organized two charity concerts in Taipei and one joint concert with Hsinchu Symphonic Band and Hsinchu Young Symphonic Band
- Led the band winning 1st place in annual national ensemble performance

Skills

Programming	proficient with Python, FORTRAN, NCL and Unix environment; familiar with WRF-Chem, MATLAB, C++ and LaTEX
Language	native speaker of Mandarin; fluent in English; beginning Japanese and Deutch
Lab	Inductively coupled plasma mass spectrometry (ICP-MS), Electron Microscopy (SEM, TEM), Electrochemical work station, Atom absorption and emission spectroscopy, Arduino