

MUHAMMAD ZULFAJRI / Ph.D.

	Nationality: Indonesia
	Language: Bahasa Indonesia, Acehese, English, Melayu, Arabic language
	<p>Autobiography: I work as an academic staff/lecture at the Service Institution for Higher Education of Region XIII, Ministry of Education and Culture of Indonesia. I am assigned at the Department of Chemistry Education, Universitas Serambi Mekkah, Indonesia. Moreover, I am also a teacher at Darul Ihsan Senior High School, Indonesia. Now, I am a 3rd year's Ph.D. student at the Department of Medicinal and Applied Chemistry, Kaohsiung Medical University, Taiwan, under supervision of Prof. Genin Gary Huang. My research interests are:</p> <ol style="list-style-type: none">1. Medicinal and Applied Chemistry<ul style="list-style-type: none">- Phytochemical Activities for Analytical and Biomedical applications.- Syntheses, Characterizations, and Applications of Photo-luminescent Materials.2. Chemistry Education<ul style="list-style-type: none">- Learning Model Development for Chemistry and Science Education.- Synthesis and Characterization of Nanoparticles for Simple and Green Chemistry Concepts in School and Undergraduate Laboratory.

Doctoral:

Institute: Kaohsiung Medical University, Kaohsiung-Taiwan
Research field: Analytical and Materials Chemistry (Frontier Spectroscopy Lab.)
Thesis supervisor / Co-advisor: Prof. Genin Gary Huang, Ph.D.

Master:

Institute: National Sun Yat-sen University, Kaohsiung-Taiwan
Research field: Biophysical and Biomedical Chemistry (Aerosol and Biomedical Materials Science Lab.)
Thesis supervisor / Co-advisor: Prof. Chia Chen Wang, Ph.D.

Publications:

Ph.D. Degree

1. **Muhammad Zulfajri**, Sandhiya Dayalan, Wang-Yu Li, Chia-Jung Chang, Yuan-Pin Chang, and Genin Gary Huang*. Nitrogen-Doped Carbon Dots from *Averrhoa carambola* Fruit Extract as a Fluorescent Probe for Methyl Orange. *Sensors (Switzerland)* **2019**, 19, 22, 5008.
2. **Muhammad Zulfajri**, Gedda Gangaraju, Chia-Jung Chang, Yuan-Pin Chang, Genin Gary Huang*. Cranberry Beans Derived Carbon Dots as a Potential Fluorescence Sensor for Selective Detection of Fe³⁺ Ions in Aqueous Solution. *ACS Omega* **2019**, 4, 13, 15382-15392

Others

3. Muttakin and **Muhammad Zulfajri***. Antioxidant Activity of Syzygium Cumini Fruit Peel Extract for Diabetes Mellitus Treatment in Alloxan-Induced Diabetic Rats, *Research Journal of Chemistry and Environment* **2020**, 24, 1, 9-13.
4. Muttakin*, **Muhammad Zulfajri**, and Mariati. Antioxidant Activity from Syzygium Cumini (L.) Skeels. *Journal of Physics: Conference Series* **2019**, 1232, 012009.
5. Zulfa Fatma, Hasanuddin, Safrida, Nurlena Andalia, and **Muhammad Zulfajri***. Progress in Students' Critical Thinking Skills and Motivation based on the Implementation of Discovery Learning modified with Think Pair Share Learning Model, *International Research Journal for Quality in Education* **2019**, 6, 1, 14-19.
6. Chia-Chen Wang*, **Muhammad Zulfajri**, You-Qing Yu. Method for Improving the Oxygen-Releasing Ability of Hemoglobin to Organs and Peripheral Tissues in Human Bodies and a Medication Thereof. *United States Patent* **2018**, No. US 10,047,063 B2 (Patent)
7. **Muhammad Zulfajri***. Mengolah Ide Penelitian dan Menembus Publikasi Artikel di Jurnal Internasional, *Buletin Haba LLDIKTI XIII* **2018**, 2, 25-28
8. **Muhammad Zulfajri*** and Muttakin. Activity Analysis of Anthocyanin from *Syzygium cumini* (L.) Skeels as a Natural Indicator in Acid-Base Titration. *Rasayan Journal of Chemistry* **2018**, 11(1), 135-141.
9. **Muhammad Zulfajri*** dan Muttakin. Metode Ekstraksi Antosianin dari Kulit Buah *Syzygium cumini* (L.) Skeels sebagai

Indikator Alami Asam Basa. Proseding Seminar Nasional II USM **2017**, 547-553.

10. Wei-Ren Chen, Youqing Yu, **Muhammad Zulfajri**, Ping-Cheng Lin and Chia C. Wang*. Phthalide Derivatives from *Angelica Sinensis* Decrease Oxygen Affinity of Hemoglobin: A New Allosteric-Modulating Mechanism and Potential Use as 2,3-BPG Substitutes. *Scientific Report* **2017**, 7, article number 5504.
11. Marsantika and **Muhammad Zulfajri***. Efektivitas Peningkatan Pemahaman Siswa Terhadap Materi Sistem Koloid dengan Menggunakan Model Pembelajaran Partner Switch. *Jurnal Edukasi Kimia* **2017**, 2(1), 72-78.
12. **Muhammad Zulfajri*** and Rizki Amelia. Pengaruh Model *Discovery Learning* dengan Media Teka-Teki Silang Terhadap Peningkatan Hasil Belajar Siswa Pada Materi Sistem Koloid. *Jurnal Edukasi Kimia* **2016**, 1(1), 14-20.
13. Wei-Ren Chen, Ping-Cheng Lin, **Muhammad Zulfajri**, Chia C. Wang, Influences of Allosteric Effectors on the Structure and Function of Human Hemoglobin Probed via Resonance Raman Spectroscopy at 532 nm. *The Third Taiwan International Symposium on Raman Spectroscopy & TARS Summer School*, 30 June - 3 July, **2015**, Nantou, Taiwan. (Abstract)
14. **Muhammad Zulfajri***. Pengaruh Penggunaan Model Pembelajaran Teams Games Tournaments pada Materi Sistem Koloid. *Jurnal Pendidikan Serambi Ilmu* **2015**, 23(2), 247-253.
15. Heng-I Kan, I-Ying Chen, **Muhammad Zulfajri**, and Chia C. Wang*. Subunit Disassembly Pathway of Human Hemoglobin Revealing the Site-Specific Role of Its Cysteine Residues. *The Journal of Physical Chemistry B* **2013**, 117(34), 9831-9839.