



MARIA ALEJANDRA TAPIA MONTESINOS

PhD in Analytical Chemistry and Environmental

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EDUCATION

- PhD** 01.09.2019 – 24.07.2023
Analytical Chemistry and Environment
University of Barcelona – Spain
Advisor: Prof. Dr Nuria Serrano
Thesis subject: “Application of 2D pnictogen materials as modifiers of screen-printed electrodes for the development of electrochemical sensors”.
- MSc** 01.08.2015 – 01.08.2017
Chemistry and Environment
Catholic University of Saint Mary – Peru
Advisor: Prof. Dr Jose Villanueva
MSc. Thesis subject: “Removal capacity of brewer fermentation residues modified by iron oxides against a reactive bifunctional azo dye from the textile industry”.
- BSc** 01.03.2005 – 01.12.2010
Pharmacy
Catholic University of Saint Mary – Peru
Advisor: Prof. Dr Jose Villanueva
BSc. Thesis subject: “Antifungal activity of the ethanol extract of *Myrcianthes ferreyrae* "Arrayán" leaves and its endophytic fungi against *Candida albicans* ATCC 18804”.

ACADEMIC ACHIEVEMENTS

Publications:

1. Tapia, M.A.; Pérez-Ràfols, C.; Oliveira, F.M.; Gusmão, R.; Serrano, N.; Sofer, Z.; Díaz-Cruz, J.M. Antimonene-modified screen-printed carbon nanofibers electrode for enhanced electroanalytical response of metal ions. *Chemosensors*, 11(4),219 (2023).
2. Tapia, M.A.; Pérez-Ràfols, C.; Paštika J.; Gusmão, R.; Serrano, N.; Sofer, Z.; Díaz-Cruz, J.M. Antimony nanomaterials modified screen-printed electrodes for the voltammetric determination of metal ions. *Electrochimica Acta*, 140690 (2022).
3. Tapia, M.A.; Gusmão, R.; Pérez-Ràfols, C; Xubirats X.; Serrano, N.; Sofer, Z.; Díaz-Cruz, J.M. Enhanced voltammetric performance of sensors based on oxidized 2D layered black phosphorus. *Talanta*, 238, 123036 (2022).
4. Tapia, M.A.; Gusmão, R.; Serrano, N.; Sofer, Z.; Ariño, C.; Díaz-Cruz, J.M.; Esteban, M. Phosphorene and other layered pnictogens as a new source of 2D materials for electrochemical sensors. *Trends in Analytical Chemistry*, 139, 116249 (2021).

5. Tapia, M.A.; Pérez-Ràfols, C.; Ariño, C.; Serrano, N.; Díaz-Cruz, J.M. New approach to multivariate standard addition based on multivariate curve resolution by alternating least squares: Application to voltammetric data. *Analytical Chemistry*, 92, 3396-3402 (2020).
6. Tapia, M.A.; Pérez-Ràfols, C.; Gusmão, R.; Serrano, N.; Sofer, Z.; Díaz-Cruz, J.M. Enhanced voltammetric determination of metal ions by using bismuthene modified screen-printed electrode. *Electrochimica Acta*, 362, 137144 (2020).

GRANTS & SCHOLARSHIPS

- Received a full scholarship “Presidente de la República” - 343245 from Peruvian National Program of Scholarships and Student Loans (PRONABEC) to accomplish the doctoral studies.
- Received a full scholarship from the National Commission of Science, Technology and Technological Innovation (CONCYTEC) to accomplish the master’s studies.
- Earned a partial scholarship to accomplish the bachelor’s degree in pharmacy and biochemistry.

PERSONAL SKILLS

Mother tongue:	▪ Spanish
Foreign language(s):	▪ English (B2)
	▪ Catalan (B2)
	▪ Portuguese (B1)
	▪ French (A2)
IT Skills:	▪ Adobe Illustrator
	▪ MS Office
	▪ Python
	▪ Statgraphics
Working skills:	▪ Great predisposition to learn new techniques.
	▪ Proactivity to solve problems from different angles.
	▪ Ability to work in a multidisciplinary and multicultural environment with respect and empathy.
	▪ Ability to communicate, both orally and in writing, scientific knowledge, procedures, results, and ideas.
Other items of interest:	▪ Driving license.
	▪ Availability to change residence.

REFERENCES

- Former advisor: Prof. Dr Nuria Serrano
University of Barcelona, Department of Analytical Chemistry.
E-mail: nuria.serrano@ub.edu
- Former director: Prof. Dr Jose Manuel Diaz
University of Barcelona, Department of Analytical Chemistry.
E-mail: josemanuel.diaz@ub.edu
- Former colleague: Evelyn Molero
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