

****POSTDOCTORAL POSITION AVAILABLE****
Microalgae for CO₂ capture from biogas and flue-gases

Autonomous Metropolitan University- Cuajimalpa Campus (UAM-C)
(Mexico City- MEXICO)

As part of the gaseous biofuels cluster of the Mexican Bioenergy Innovation Center (CEMIE-Bio, acronym in Spanish), the researchers of UAM-C participating in this cluster are pleased to issue the present call for a postdoctoral position.

The CEMIE-Bio, as the other Mexican Energy Innovation Centers, seeks to increase in Mexico the participation of technologies based on the use of renewable resources to ensure the energy security and environmental sustainability while reducing the dependence of fossil fuels.

The CEMIE-Bio cluster is focused on the valorization of different type of organic wastes for the production of biogas and biohydrogen.

Particularly, the participation of UAM-C is focused on:

Microalgal CO₂ capture systems for biogas conditioning, reduction of flue gases and for the production of biomass and its use for producing gaseous biofuels or added-value products

With experience on this field (you can see a list of the most recent publications at the end of the page), the researchers of the UAM-C seek for a candidate that will help to accelerate the generation of scientific and technological knowledge by doing lab and pilot plant experimental research, supervising students and publishing the results in high impact scientific journals.

Profile: The candidate should hold a PhD on bioprocess, biochemical, biotechnology, chemical or environmental engineering or microbiology. It is necessary to demonstrate knowledge (via publications or conference proceedings) on microalgae cultivation, photobioreactor operation and desirable capabilities on monitoring, instrumentation using engineering software (Labview or other platforms) or molecular tools. However, it is completely necessary to demonstrate skills on writing English scientific documents. Communication skills and experience on student supervision will be appreciated. Please, send a resume (CV) to the following contacts:

Contact:

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Deadline for application should be June 30, 2017

List of recent publications:

1. Cabello J., **Morales M***, **Revah S.** 2017. Short-term effect of the inlet gas flow and light-dark cycles on the photosynthetic activity of the microalga *Scenedesmus obtusiusculus*. Ready to be submitted to Biotechnology and Bioengineering
2. Buitrón G., Carrillo-Reyes J., **Morales M.**, Faraloni C., Torzillo G. 2017. Biohydrogen production from microalgae. Book Microalgae-Based Biofuels and Bioproducts, editor Raul Muñoz and Cristina González. Elsevier. ISBN 9780081010235
3. Cabello J., **Morales M***, **Revah S.** 2017. Short term strategy to evaluate the CO₂ consumption rate of the microalga *Scenedesmus obtusiusculus* at inlet CO₂ concentration changes. Journal Science of the Total Environment. Apr 15: 584-585:1310-1316. DOI: 10.1016/j.scitotenv.2017.02.002.
4. **Morales M***, Cabello J, **Revah S.** 2015. Chapter 8. Gas balances and growth in algal cultures. In Algal biorefineries Vol. 2 Springer International Publishing Switzerland. Ales Prokop, Rakesh Bajpai and Mark Zappi. (eds.), Algal Biorefineries, DOI 10.1007/978-3-319-20200-6_8. ISBN 978-3-319-20200-6. 263-314pp
5. Cabello J., Toledo A., Sánchez L., Revah S, **Morales M***. 2015. Effect of the temperature, pH and irradiance on the photosynthetic activity by *Scenedesmus obtusiusculus* under optimal conditions and nitrogen starvation. Bioresource Technology 181: 128–135 DOI: 10.1016/j.biortech.2015.01.034 ISSN: 0960-8524
6. Sánchez L, **Morales M***. 2015. Microalgae as source of high added-value compounds: carotenoids. microalgae and other phototrophic bacteria: Culture, processing, recovery and new Products. NOVA SCIENCE PUBLISHERS. Edited by Luis Torres. ISBN: 978-1-63482-078-3. 241-272 pp
7. Toledo A, **Morales M***. 2015. Biogas production and upgrade using microalgae. microalgae and other phototrophic bacteria: Culture, processing, recovery and new products. NOVA SCIENCE PUBLISHERS. Edited by Luis Torres. ISBN: 978-1-63482-078-3. 287-312 pp
8. Cabello J., **Morales M.**, **Revah S***. 2014. Dynamic photosynthetic response of the microalga *Scenedesmus obtusiusculus* to light intensity perturbations in an airlift photobioreactor. Chemical Engineering Journal 252: 104-111. DOI/10.1016/j.cej.2014.04.073
9. Toledo A, **Morales M.*** 2014. Biorefinery: Using microalgal biomass for producing lipids, biofuels and other chemicals. Energy and Environment Nowadays. Edited by Luis Torres and Erick Bandala. NOVA SCIENCE PUBLISHERS, INC. ISBN 978-63117-399-8-1. 17-56 pp
10. Toledo A., **Morales M.***, Novelo E. **Revah S.** 2013. Carbon dioxide fixation and lipid storage by *Scenedesmus obtusiusculus*. Bioresource Technology 130:652–658 DOI:10.1016/j.biortech.2012.12.081
11. Jacob-Lopes E., **Revah S.**, Hernández S., Shira, K., Franco TT. 2009. Development of operational strategies to remove carbon dioxide in photobioreactors. Chemical Engineering Journal 153 (1), 120-126

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