

Postdoctoral

Ecole/Institution/Société:

University de Sao Paulo, Brazil / Sao Paulo

Discipline:

Mechanical Engineering

Type d'emploi::

Full-time

Date de publication:

2022-04-18

Personne à contacter:

If you wish to apply for this position, please specify that you saw it on AKATECH.tech

Post-doctoral Development of Chromatographic Methodologie

Job Title: Post-doctoral Development of Chromatographic Methodologies - REF 22PDR161

Department: Mechanical Engineering

Institution : University de São Paulo, Sao Paulo, Sao Paulo, Brazil

Job Categories

- Post-Doc
- Academic Fields
- Mechanical Engineering
- Engineering Physics
- Engineering Mechanics
- Engineering - Other

Project title:

- Development of Chromatographic Methodologies Applied to Products from Electrochemical Reactors”

Research theme area:

- High Performance Liquid Chromatography; Gas chromatography; Electrochemical Reactors; Energy Interconversion;

Summary of the Post:

“The research group at PME-Poli works with the development and study of modern system for the interconversion of energies. The goal of this postdoctoral position is the development, test and characterization of chromatographic methods for the quantification and detection of molecules/products generated in new electrochemical reactors, such as organic molecules

containing more than one carbon (*i.e.* C2+), hydrogen and oxygen gases, etc. Important aspects of this position are: (i) outstanding ability to work collaboratively; (ii) proven experience in the development of both HPLC and GC chromatographic methods; (iii) as well as proven experience in

managing the flows of consumables and equipment in a research laboratory.”

Description of the post - Key Responsibilities:

Research Duties:

- To take initiatives in the planning of research;
- To develop and characterize new chromatographic methods for both HPLC and GC;
- To integrate on line a HPLC and a GC to an electrochemical reactor;
- To identify and develop suitable approaches for tackling the problems associated with new chromatographic methods;
- To design reproducible experiments and conduct data analysis;
- To ensure the validity and reliability of data at all times;
- To maintain accurate and complete records of all findings;
- To write reports for submission to research sponsors;
- To present findings to colleagues and at conferences;
- To submit publications to refereed journals;

Management Duties:

- To manage a laboratory and help maintain a clean, safe and productive environment;
- To plan and manage project workshops;
- To assist postgraduate and undergraduate research students in their work making sure that they comply with laboratory operations;
- To write and submit appropriate research summary reports;
- To comply with relevant Institutional policies, including Financial Regulations, Equal Opportunities Policy, Promoting Race Equality Policy, Health and Safety Policy, Information Systems Security Policy and Intellectual Property Rights and Register of

Interests Policies.

Financial Duties:

- To manage the finances associated with the project.

Strategy Duties:

- To assist in the preparation and writing of reports

Requirements to fill the position:

- Applicants are required to demonstrate that they possess the following attributes:

Qualifications

- PhD degree in physical sciences or related (within less than five years).
- Expertise with the development of methods to High Performance Liquid Chromatography and Gas Chromatography.

Experience (are highly valued, albeit not fully required)

- Experience in handling all aspects of an HPLC and GC device;
- Knowledge of catalytic mechanisms;
- Experience with transdisciplinary research and practical experience of working as part of a

research team.

Skills and Abilities

- Supervisory/Staff Management Skills;
- Teaching skills;
- Ability to exercise initiative;
- Programming skills, especially in lab-based systems;
- Ability to relate appropriately to others;
- Report writing skills;
- Presentation skills;
- Ability to conduct a detailed review of recent literature;
- Ability to develop and apply new concepts;
- Creative approach to problem-solving;
- Ability to direct the work of a small research team and motivate others to produce a high standard of work;
- Ability to prioritise own work in response to deadlines;
- Basic computer skills, including word-processing, spreadsheets and the Internet.

Knowledge

- Knowledge of High Performance Liquid Chromatography and Gas Chromatography.
- Knowledge of catalytic mechanisms;

INFORMATION ABOUT FELLOWSHIP:

This Postdoc fellowship is funded by FUSP. The fellowship will cover a standard maintenance stipend of R\$ 7.373,10 per month.

MORE INFORMATION:

<https://www.rcgi.poli.usp.br/opportunities/>

Position: Post-Doctoral Fellowship REF: 22PDR161

<https://www.rcgi.poli.usp.br/opportunities-application/> AND APPLICATION AT REF 22PDR161 - Post-Doctoral Fellowship

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