Progress beyond

Senior Research Scientist Computational Chemistry (Job ID: 11912)

GBU/Function: R&I

Job family: R&I

Job Location: Shanghai, China

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Solvay is a science company whose technologies bring benefits to many aspects of daily life. With more than 24,100 employees in 64 countries, Solvay bonds people, ideas and elements to reinvent progress. The Group seeks to create sustainable shared value for all, notably through its Solvay One Planet plan crafted around three pillars: protecting the climate, preserving resources and fostering better life. The Group's innovative solutions contribute to safer, cleaner, and more sustainable products found in homes, food and consumer goods, planes, cars, batteries, smart devices, health care applications, water and air purification systems. Founded in 1863, Solvay today ranks among the world's top three companies for the vast majority of its activities and delivered net sales of €10.2 billion in 2019. Solvay is listed on Euronext Brussels (SOLB) and Paris and in the United States, where its shares (SOLVY) are traded through a Level I ADR program.

The Research & Innovation function (R&I) leads Solvay into new growth territories with breakthrough innovation to generate new products, applications and processes in the field of sustainable chemistry. Partners with the GBUs to deliver more value and leverages the Group's capabilities to improve competitiveness and create new business opportunities for Solvay and its customers.

Vacancy description

The successful candidate will be responsible for investigating the chemical reactivity of molecules and materials, for instance processes occurring at solid/liquid/gas interfaces, as well as non-reactive events, such as adsorption phenomena. He / she will work in a multi-disciplinary and multi-cultural team dedicated to the development of eco-efficient products and processes, in collaboration with internal teams and external research institutions.

We foresee that this position will evolve to a team leader / platform manager role in the near future. Therefore, we particularly encourage applications from candidates with several years of experience in an industrial setting, demonstrated leadership, and a vision for modeling and simulation.

Key missions

- Work in the Research and Innovation Center in Shanghai for Solvay/CNRS Joint Lab – Eco-Efficient Products and Processes Laboratory (E2P2L)
- Plan, perform, analyze, and document quantum-chemical calculations for the study of chemical reactivity of molecules and materials, including in collaboration with internal and external partners
- Build project files with the most up-to-date literature and ensure the update of such files during the lifetime of the projects
- Identify and promote the added value of modeling for R&D projects and propose corresponding modeling approaches, using his/her quantum and physical chemistry skills

Education and Experience

- Doctorate or post-doctorate in computational chemistry, physics or materials science

- 5 to 10 years of relevant working experience, ideally in industry, application-oriented research organizations or with industrial stakeholders
- Demonstrated people or project leadership

Skills

- Excellent track record in applying quantum-chemical (DFT or wavefunction-based) and force-field based methods to the study of chemical reactivity, adsorption phenomena, and related properties
- Experience with one or more additional techniques, such as machine learning, statistical approaches, advanced modeling of solvents effects, kinetic modeling, (ab initio) molecular dynamics …
- Knowledge of programming languages is considered a plus, but not mandatory
- Critical thinking and strongly problem-oriented work style
- Excellent ability to work in a team and communicate with internal and external stakeholders