Computational Scientist – Plasma-Surface Interaction and Plasma Physics

Applied Materials Inc.

Applied Materials is the world leader in materials engineering solutions used to produce virtually every new chip and advanced display in the world. Our expertise in modifying materials at the atomic scale and on an industrial scale is a key enabler behind the advances in most electronics technologies. We have an opportunity for a computational plasma physicist or chemist to help design the next generation of plasma processing equipment. This position requires in-depth knowledge and experience in computational physics or chemistry, computational plasma physics, computational surface science, or related areas. Additional knowledge of plasma materials processing and the semiconductor industry is valuable but not essential.

Key Responsibilities

1. Develop and test mechanisms for plasma interaction with surfaces and implement in feature scale etch and deposition models.

2. Perform plasma physics and/or plasma chemistry modeling of plasma processing systems to provide a better understanding of plasma behavior during concept & feasibility, design, and development of plasma processing systems.

3. Perform feature scale and molecular dynamics modeling of plasma etch and deposition processes for emerging applications.

4. Develop, modify, and test internal plasma, feature scale, and related codes as needed.

5. Perform engineering analysis. Recommend design modifications to improve plasma and process behavior to address technical/business needs.

6. Apply internal and/or external codes to address plasma and plasma–surface interaction related problems as needed.

7. Work in a team environment. Present modeling results and recommendations to the product development teams.

8. Provide technical expertise in plasma physics and plasma chemistry to management.

Functional Knowledge

- Demonstrates conceptual and practical expertise in computational physics or chemistry, computational plasma physics, computational surface science, or related areas.

- Knowledge of plasma materials processing is a plus.

- In-depth knowledge of computational methods and experience in developing scientific software desirable.

Education

Masters or PhD

0 – 3 Years of relevant experience

Position suitable for new PhDs or post-docs

Contact:

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