33989- Process Simulation Engineer

Scope of Position: The Process Simulation Scientist is responsible for developing and applying modeling tools for solving process problems and equipment designs. Candidate must have an in-depth knowledge in surface and thin film processes, and a strong expertise in numerical simulation. This position requires excellent communication and interpersonal skills in order to work effectively across multiple organizations in Research, Development, and Engineering.

Day to Day Responsibilities:

1. Develop and apply numerical models to solve process problems and to design equipment

2. Collaborate with other scientists and engineers to solve practical problems in process and product design

3. Advance our capabilities in process design and control via modeling & experimentation

4. Communicate modeling results/conclusions to drive fundamental understanding and project decisions

Travel requirements (please note if international): Expected travel time <10% (domestic).

Hours of work/work schedule/flex-time: 40 hours per week but some flexibility is required.

Education and Experience (minimum required for consideration): PhD in Mechanical Engineering, Chemical Engineering, Electronic Engineering or related areas.

Required Skills:

1. Academic study or research experience with in-depth knowledge in surface and thin film process is required.

2. Expertise in thin film deposition and etching processes

3. Experience with plasma and plasma modeling

4. Experience with electromagnetic field modeling

5. Problem solving skills and strong engineering intuition. Results oriented thinking.

6. Ability to breakdown real world problems into solvable modeling objectives

7. Ability to effectively interact and communicate with people of diverse backgrounds

Desired Skills:

1. Experience with plasma-assisted thin film processes (e.g. PVD, PECVD)

2. Experience with vacuum RF plasma and atmospheric pressure (AP) RF plasma

3. Experience in Computational Fluid Dynamics and heat transfer

4. Experience with multiscale modeling: molecular dynamic and continuum medium modeling

5. Problem solving skills with developing hypotheses of problems’ root causes and applying modeling tools to test the hypotheses

6. Knowledge and experience of numerical simulation software and platforms such as ANSYS, COMSOL, etc

7. Knowledge and experience of analytical analysis of theory and experimental data 8. Experience of experimental work or collaboration is desired

Soft Skills:

1. Must be self-motivated and demonstrate strong curiosity of the technical work

2. Take ownership of problems, and responsive approach to projects and timelines.

3. Excellent written and verbal communication skills in English

4. Respect others and be willing to work across diverse cultures and backgrounds

5. Able to work both independently and with a team.

This position supports immigration sponsorship.