



SilcoTek Corporation R&D Scientist Job Description

Department: Research & Development	FLSA: Exempt
Reports to: Research & Development Manager	Revision Date: 08/19/2022

Job Summary

Research and develop new coatings, functionalizations and/or surface treatments that provide improved capabilities of existing product surfaces and potential new products. Coordinate with the Marketing, Sales, Process Engineering, Engineering and Manufacturing Teams and customers to identify and support new and existing technologies, which can be utilized to improve existing products and/or to develop new products. Identify, develop, troubleshoot, and implement processes improvements and technologies to increase quality and utilization of equipment. Provide technical support and education to the employees and customers of SilcoTek.

Duties/Responsibilities

- Identify and develop new sources of surface treatments and/or materials to provide increased revenue, consistent with SilcoTek's strategic plan. This may include collaboration with universities and/or other companies to develop new technologies or transfer/license existing technologies.
- Work closely in conjunction with Sales and Marketing and with key customers to provide high-level technical support for their coating and surface modification needs.
- Assist in the definition of the scope and performance of new products (product definition) and circulate for review and approval. Perform research and experimentation to evaluate the performance of prototype products and measure product performance relative to product definition.
- Work to identify and protect SilcoTek intellectual property (IP). Work closely with SilcoTek IP council to develop and write IP protection strategies as well as with SilcoTek employees to help educate the company on the value of maintaining IP security.
- Maintain good records of experimentation and troubleshooting and communicate progress on projects through monthly reports and at staff meetings.
- Train Process Engineering, Engineering, and Manufacturing technicians in the preparation of new products and/or processes.
- Coordinate transfer of new products or processes to Process Engineering and Manufacturing, including training of personnel on new procedures, documentation of production procedures in ISO format and assist setting of new product specifications and providing technical support.



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- Generate publishable data including figures and tables to be used by the Marketing in promotional literature. Writing technical articles such as Technical Insights (TI's) and white papers for company marketing materials.
- Assist Manufacturing and Process Engineering in troubleshooting, process improvements, and streamlining of processes.
- Responsible for answering specific customer inquiries in area of expertise, typically in the form of Level II call transfers from primary technical service personnel or customer service representatives.
- Review SilcoTek technical literature before publication as requested.
- Maintain contacts with customers such as sales representatives, customers, applications chemists and product managers to obtain input on new products and customer's needs.
- Practice safe working procedures and follow guidelines specified by the Safety Team, especially when working in the production and laboratory areas.
- Utilize knowledge of rapidly expanding markets, producibility, and compelling market stories and/or enabling technology (RPC) to consider new product development.
- Assist in resolving product quality problems with the Quality Team and improving process efficiency, as requested.
- Represent SilcoTek at trade shows, seminars and customer visits as requested.
- Responsible for the safe handling of materials and for the quality of processes under the domain of the job responsibilities.
- Address and assist with safety concerns related to the SilcoTek work environment
- Assist Engineering with Manufacturing issues and the development of future process systems.
- Continue educational development
- Additional duties as assigned

Required Skills/Abilities

- Competent use of computers: operating systems, email, spreadsheets, word processing and database applications.



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- Works well with others in a team environment
- Knowledgeable in the use of apparatus and interpretation of data from equipment such as gas delivery systems and processing ovens and equipment. Desirable to have experience with PLC control systems; operation of analytical tools such as FT-IR, SEM/EDS, XPS, and other surface analysis equipment.

Education and Experience

Advanced degree in chemistry and/or materials science. 5 years of work experience in related areas accepted in lieu of degree.

Experience in materials chemistry, surface science, CVD industry, and/or semiconductor industry preferred.

Work Environment / Physical Requirements

Work is typically performed in an office environment and laboratory environment. Occasional work is performed in a manufacturing environment.