

Profiles of consultants in the area of Semiconductor Chemicals

T. V. Jayaraman, Ph.D., MBA
Activity Leader

Accomplished technology professional with a proven ability to develop and implement strategic plans for product development/launch, business development and marketing with extensive knowledge of semiconductor chemicals.

Unique combination of education & experience in the management of technology and business projects – advanced degree in Polymer Chemistry, MBA in International Marketing and over 20 years of management experience in photolithographic materials and processes.

Range of experience in Semiconductor Industry is spread over Strategic Planning, Marketing, Business Development, Client Relations, Product Development, Applications, Technical Support of Photoresists, Developers, Strippers and Ancillaries. Extensive knowledge of the semiconductor industry, technology, applications and customer base.

Trevor Clarke, Ph.D.

Trevor is a very valuable resource for the chemical industry as a seasoned chemical technology professional with Doctorate in Organic Chemistry coupled with management experience over a span of four decades in the semiconductor, graphic arts and dyestuff industries.

Experience in these industries spread across various functions such as Technical Director, Product Development, Technology Transfers, Regulatory Issues, Process Reviews, Client Relationships, Technical Liaison, Market Development, and New Business Development. Also worked as an industry consultant in microelectronic and graphic arts industries for nearly 5 years.

Deep-rooted knowledge enriched by work experience in the fields of Photoactive Sensitizer Compounds, Sensitized Novolaks and other intermediates For the DNO Photoresists and Deep UV resists, Thick Film Resists and Ancillaries.

Larry Ferreira, M. S.

Masters Degree in Chemistry with over 20 years experience in semiconductor and electronic chemicals industry and another 5 years in Pharmaceutical industry.

Expertise covers all aspects of process, product and materials development for microelectronic applications. Extremely successful in development, characterization and scale up intermediates for Deep UV resists (photoacid generators, monomers and additives), DNQ resists (Photo active compounds, additives), Developers, Strippers & Cleaners for Positive Resists, Negative Resists and Low-K Dielectric Substrates.

Deep knowledge of the function and composition of Positive DNQ resists, Chemically Amplified Deep UV resists, Stripper formulations for all types of Photoresists. Project Management in the area of materials and process development of new polyphenolic molecules and photoactive intermediates for Photoresists, Deep UV resists and related formulations.

Key research interests include rational new product design through structure-property relationships and organic synthesis using molecular modeling and simulation. Highly skilled in modern synthetic and analytical techniques such as HPLC, LC/MS, Flash Chromatography and NMR.

Susan Coroa, M.S.

Masters Degree in Chemistry and over 17 years of experience in the chemical industry mostly in semiconductor chemicals used in photoresists and other related formulations.

Knowledge covers raw materials, intermediates, compositions and formulations of Photoresists, Developers, Ancillaries, Strippers and other related products.

Experience covers areas of Analytical Chemistry, Product Development and Scale Up, Technology Transfers, Regulatory Support, and Technology Transfers.

The regulatory work entitled Origination, Review, Updates, Maintenance and Technical Support of MSDS. Preparation of documentation for Low Volume Exemptions (LVE), Pre-Manufacturing Notices (PMN) filings with EPA, and import of products from Japan, Regulatory support for new chemical compounds that are generated by R&D, determining their filing status with EPA, toxicology & hazardous nature, generating new MSDS and Internal auditing for QMS, ISO 14000 and QS 9000.

Ulrike Shastri, Ph.D.

Has an advanced degree in Polymer Science with over 10 years experience in various areas of Microlithography.

Professional expertise includes:

Successful design and development of unique technology platforms for 193 nm and 248 nm Deep UV resists, establishing a fundamental understanding in the development of next generation wafer clean technologies for the IC industry, and development of residue cleaners, post-etch cleaners and post CMP cleaners, resist strippers, developers and Edge Bead Removers (EBR)

Thorough understanding of the technology and materials for advanced resists for Deep UV Lithography, new generation of Strippers and Cleaners for Copper and Low-k dielectric technology, Post-CMP cleaners, and EBR formulations.

Managed several research interactions on both national and international level with leading institutions including International SEMATECH and IMEC for advanced wafer cleaning and post CMP technologies.

Authored or co-authored over 10 papers, 8 patents and 1 book chapter in the field of Microlithography and energy cure and served as a Member of the Organizing Committee and co-chaired several SPIE Symposia on Advances in Resist Technology and Processing.
