



Eugene Ngai

Chemically Speaking LLC

Eugene has over 50 years of Specialty Gas experience in production, laboratory, R&D, engineering and safety positions. From 1988 to 1999 as Vice President of Technology and HSE he developed a small family owned business, Solkatronic Chemicals into a worldwide leader in the Electronic Specialty Gas business. This was acquired by Air Products in 1999 and he expanded their operations in the growing Asian market. He retired from Air Products in 2009 and formed Chemically Speaking LLC a compressed gas safety and emergency response training and consulting corporation. Chemically Speaking LLC currently has numerous multi-year agreements to advise manufacturers, suppliers and users of specialty compressed gases, primarily in the Semiconductor, LCD or Photovoltaic industries. He travels over 150,000 miles per year on projects.

He continues to be active in a number of worldwide industry association working groups, CGA G-13 (Silane), NFPA 55 (Industrial and Medical Gases), NFPA 400 (Hazardous Materials), NFPA 318 (Semiconductor Facilities), SEMI EHS, SSHA and UN TC58 SC2 WG7 (Gas Toxicity ISO 10298, Flammability, Oxidizer ISO 10156). He organized and coordinated 6 days of silane release testing in 2011 and 2012, in New Mexico to gather data for revision of CGA G-13 standard on silane a pyrophoric gas that has been involved in over 18 fatalities in 30 years. He completed with Prof Chen 2 years Hexachlorodisilane reactive gel testing, aka "Popping" gel that has been involved in numerous incidents. He organized and chaired a one day seminar on this topic in 2018 and 2019. He published 4 peer reviewed articles based on this work. He also coauthored with his daughter a peer reviewed article : " Compressed Gas Safety In Universities" in 2020. In 2021 he conducted physical property and safety research on disilane and liquid oxygen. He is now doing silane foreline dilution testing. He has made over 300 presentations worldwide on Emergency Response, Product Safety, Gas Technology and Environment over the last 35 years. He has campaigned extensively on silane safety. He organized and chaired 12 one day silane safety seminars for free, in Taiwan, Korea, Singapore, US and Europe starting in 2006. He continues to conduct compressed gas safety and emergency response classes throughout the world. He has taught numerous courses (1-3 day) on compressed gas safety and emergency response and has trained over 19,000 users from government agencies, universities, gas manufacturers and semiconductor fabrication facilities. He has also taught at a number of Fire Academies worldwide, including New York, Honolulu, San Jose, Camden County and Singapore and presents at 3-4 HazMat Conferences per year. He has trained over 9,000 firefighters/HazMat team members.

Eugene has a Bachelor of Science in Chemical Engineering and a Master's in Environmental Engineering He was honored with the Compressed Gas Association (CGA) Lifetime Safety award in 1999, Fire Dept of New York Commissioners award in 2007, made a Semiconductor Environmental Safety and Health Association (SSHA) Fellow in 2009, received the American Chemical Society Howard Fawcett Award for Contributions to Chemical Safety award in 2011 and the SSHA Lifetime Safety Award in April 2020. He has 6 US patents for Gas Safety Devices. He designed the Solkatronic 5502 ERCV (Cylinder salvage vessel) in 1989 that has become the standard in high pressure leaking cylinder containment worldwide. Over 450 are in use worldwide including FBI HMRU and FDNY HazMat 1.
