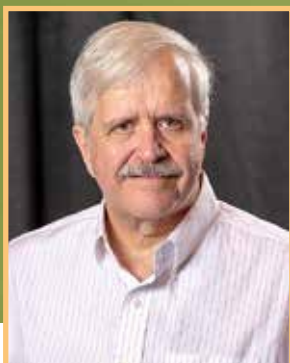


Technologies for more environmentally friendly products



A conversation with Tony O'Lenick,
President of Nascent Technologies Corporation

After 30 years, Tony O'Lenick has retired as Co-Founder and President from Siltech LLC and re-emerged with his newly formed business, Nascent Technologies Corp., a consulting, intellectual property and product development company. At Siltech he leaves a legacy of having contributed to the expanded use of silicones in various personal care applications. Tony is also responsible for teaching many new personal care formulators how to capitalize on the many benefits of silicones via his numerous educational pursuits, including several publications, volunteer efforts for the Society of Cosmetic Chemists and International Federation of Societies of Cosmetic Chemists, and countless speaking engagements. In 2018, he received the Maison G. de Navarre Award, the Society's highest honor.

EURO COSMETICS: *Tony, first of all. How are you in the time of Corona?*

Tony O'Lenick: Thankfully, we are doing well under the circumstances. A great deal of work is being carried out on web based systems. I miss the travel and face to face but staying well is the first concern.

EURO COSMETICS: *How has the Corona Virus impacted your business?*

Tony O'Lenick: Fortunately only minimally.

EURO COSMETICS: *Milton J. Rosen, one of the great pioneers of surfactant research has also impacted your business life. How important were his contributions to your career?*

Tony O'Lenick: His book *Surfactants and Interfacial Phenomena* presents a road-

map used to evaluate fatty surfactants, a very important class of compounds, which I used to evaluate silicone surfactants, the topic for which I was received the award named for his father. During a program to honor the life and work of Dr. Rosen in 2017 I offered these words: "Dr. Rosen – Those of us that were not given the opportunity to be your student; Those of us not given the opportunity to listen to your lectures; You have touched our lives and research, by your leadership, your roadmap and your most importantly your mentorship. And for that we Thank you."

EURO COSMETICS: *How did you know Dr. Rosen?*

Tony O'Lenick: I knew of Dr. Rosen as an icon in our industry, reading his articles, patents and reading his book. I was given

the high honor of receiving an award from The American Oil Chemists' Society which Dr. Rosen sponsored to honor his father, an ink chemist. I received the award in 1996 and spoke with him for some time and presented my work on silicone surfactants. He was very gracious with praise and interest in the work. The award is one example of his offering mentorship, something I came to appreciate more and more as my career advanced.

EURO COSMETICS: *How has Dr. Rosen's surfactant work influenced the direction of Siltech's research?*

Tony O'Lenick: In his book and in his research set out a series of properties of surfactants that are based upon carbon chemistry. This same set of properties were evaluated in a newly invented series

surfactants based upon silicone. Although not identical, the properties were analogous to the rules Dr. Rosen and his associates developed and made evaluation and interpretation of the new products much easier. He encouraged the work by honoring me with an award named for his father.

EURO COSMETICS: *And what did you learn from Dr. Rosen's work that helped you design new silicone surfactants?*

Tony O'Lenick: Providing guidance in the form of his work, identified his approach to making the technology understandable. Having seen his insights on carbon based products of many different surfactants, it was easier to pick the important tests and predict the properties, then test the hypothesis that there are similarities in the trends of properties in silicone surfactants and carbon surfactants.

EURO COSMETICS: *What cosmetic product areas emerged from Dr. Rosens research?*

Tony O'Lenick: The organo-functional silicone surfactants resulted in many patents over the 30 years. They are found in many cosmetic products. They are powerful emulsifiers, foaming surfactants for aqueous and hydrophilic applications, conditioners for hair and elastomers for aesthetics.

EURO COSMETICS: *What advantages do these silicone surfactants have over organ-*



ic surfactants and how have these contributed to cosmetic science relative to novel materials and claims in cosmetic products?

Tony O'Lenick: The major advantage to silicone based surfactants is that the aesthetics are quite superior to those achievable with standard carbon based surfactants. Specifically, carbon based chemistries provide functional surfactants that tend to be sticky, while the silicone versions can be made to provide a highly prized powdery effect. Silicone surfactants if properly chosen because of their lower surface tension can provide spreadability,

rheology and water resistance that is not possible with carbon surfactants. Finally, unlike acrylate polymers, silicone polymers are not plastics, a concept that is becoming more and more important

EURO COSMETICS: *How important was Dr. Rosen's work to our industry?*

Tony O'Lenick: Dr. Rosen was the author of one of the most influential books on surfactants entitled *Surfactants and Interfacial Phenomena*, this book explains why and how surfactants operate in interfacial processes and shows the correlations between a surfactant's chemical structure and its action. This book is a virtual roadmap. This book provides an easy-to-read, user-friendly resource for industrial chemists and a text for classroom use and is an unparalleled tool for understanding and applying the latest information on surfactants. It is a roadmap to understanding surfactants.

EURO COSMETICS: *Tony, currently you are President of Nascent Technologies a consultancy and product development company. What does your company specialize in?*

Tony O'Lenick: Nascent Technologies was set up to allow for a channel for us to work with companies to modify their products making them more environmentally friendly. I believe that in light of new understanding of how our products impact





on the environment, a company needs to be able to improve the environmental acceptability while keeping the performance. Polymers, more specifically natural polymers can be provided to meet both performance goals and natural claims. Biodegradability, renewability, accessibility in the market and green properties (BRAG) are the topics we address as well as patentability. The most important first step is to define clearly the parameters needed for the project to be a success. Once this is done a roadmap to solve the problems and work on a confidential basis with the development partner is set up and followed.

EURO COSMETICS: *And which customers do you serve?*

Tony O'Lenick: We have had our best success with companies that understand coming changes and are willing to address issues before they become critical. This requires work, synthesis and formulation work to adopt new generation products. The use of the roadmaps provided by Dr. Rosen and adding other requirements like regulatory compliance allows us to direct our resources to specific polymers. Items like coral reef impact, plastics in the ocean and undesired compounds present like 1,4 dioxane are primary areas of focus. Patents are also a key aspect to protect the inventions.

EURO COSMETICS: *You will soon give a course offered by the Society of Cosmetic Chemists (SCC) on the introduction of patents. What is the goal of the course and who is it suitable for?*

Tony O'Lenick: The course on patents has been offered at SCC for many years. It is not designed to make patent lawyers or agents from chemists, but rather to expose the chemist to specific concepts that will allow the chemist to understand the „patent language“ and to advocate for patentability for their own invention. Since patent practitioners speak a very complex language that is foreign to most chemists, breaking this language down and explaining the meaning of technical jargon for chemicals is critical. In order to be successful, the chemist must be able to navigate patents (freedom to operate concepts) and patentability as well as formulation, raw material and regulatory. That is a lot on multi-disciplinary areas. Our aim is to help in this area.

EURO COSMETICS: *Finally, what do you expect in the aftermath of the pandemic and how will this change the industry?*

Tony O'Lenick: I suspect that we will continue to evolve the use of web based technology to see our customers and technical partners more often. We have been averaging 5–10 hours of internet sessions each week during the pandemic. I believe more frequent, shorter and more one customer based presentations on both product development and general education will reduce the time it takes to get to market. I also believe that conventions and large meetings may well be offered in both a physical and virtual world once the bugs get worked out. This whole experience will be as transformative as the introduction of computers and the internet were in the 1980s and 1990s. We may well have a beer together with an associate from different countries.

EURO COSMETICS: *Thank you for the conversation.* ■

