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John C Warner

Warner Babcock Institute, USA

Green chemistry: An opportunity for growth and competitive advantage

People often discuss “barriers” to the implementation of green chemistry. This leads to the impression that there is some form of “push back” in the market for sustainable technologies. However, if a technology has attractive performance and cost attributes, it is unlikely that the additional presence of “sustainable” attributes will inhibit its adoption. Most often the “push back” in the market is related NOT to the sustainability aspect, but to the absence of sufficient performance and cost aspects of a product. History has shown us that for a technology to be successful in the market place, it cannot depend solely on its “sustainability” but must also be consistent with the traditional drivers. Developing successful green chemistry technologies therefore is fundamentally a challenge in innovation at the molecular level. An important reason why technology organizations have a difficult time meeting this challenge is because most academic chemistry and materials science programs do not adequately teach students techniques to help them design products that are sustainable. Universities around the world are finding ways to add the principles of green chemistry into their curriculum, and one day most, if not all, scientists will have the adequate training - but this will take several years. Until the entire chemistry workforce is fully trained in green chemistry, those organizations who have internalized green chemistry for themselves will enjoy significant competitive advantage. This presentation will discuss steps that companies at all positions of the supply chain can take to ensure that they get to, and stay at, the cutting edge of green chemistry.

Biography

John C Warner is the recipient of the 2014 Perkin Medal, widely acknowledged as the highest honor in American Industrial Chemistry. He received his BS in Chemistry from UMASS Boston, and his PhD in Chemistry from Princeton University. After working at the Polaroid Corporation for nearly a decade, he then served as Tenured Full Professor at UMASS Boston and Lowell. In 2007 he founded the Warner Babcock Institute for Green Chemistry, LLC where he serves as President and Chief Technology Officer, and Beyond Benign. He is one of the founders of the field of Green Chemistry, co-authoring the defining text Green Chemistry: Theory and Practice with Paul Anastas. He has published over 200 patents, papers and books. His recent work in the fields of pharmaceuticals, personal care products, solar energy and construction and paving materials are examples of how green chemistry principles can be immediately incorporated into commercial relevant applications. He received The 2004 Presidential Award for Excellence in Science Mentoring, the American Institute of Chemistry's Northeast Division's Distinguished Chemist of the Year for 2002 and the Council of Science Society President's 2008 Leadership award. He was named by ICIS as one of the most influential people impacting the global chemical industries. In 2011 he was elected a Fellow of the American Chemical Society and named one of “25 Visionaries Changing the World” by Utne Reader.

John.Warner@WarnerBabcock.Com