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Meyer R. Rosen,
FRSC, FACFE, CPC, CChE, DABFET

Meyer R. Rosen is Founder & President of Interactive Consulting, Inc. (IC) (www.chemicalconsult.com). His company is a technology-based, management consulting firm committed to Creating & Facilitating BREAKTHROUGHS in market, product and process development by empowering individuals and groups involved in technical, business, leadership and culture issues.

IC provides Developmental, Technical Marketing and New Business Development Services internationally to the specialty chemical, personal care, cosmetic, pharmaceutical, medical device and allied industries.

CONSULTING SERVICES

IDEATION:

- Catalyst for Novel Thinking
- Applications Oriented
- Creative Technical Solutions
- Technology Transfer
- Strategic Planning & Implementation

TECHNICAL INFORMATION

- Custom Market Research
- Technology Assessment & Evaluation
- Capture & Presentation of Complex Information
- Mind Mapping Training & Applications

COMMUNICATION

- Meeting Facilitation
- Technical Marketing
- Technical Writing & Editing
- Event Planning



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FACFE:	Fellow: American College of Forensic Examiners
CChem, FRSC	Chartered Chemist and Fellow: Royal Society of Chemistry (London)
FAIC	Fellow: American Institute of Chemists
CPC, CChE	Certified Professional Chemist, Certified Professional Chemical Engineer- National Certification Commission in Chemistry and Chemical Engineering
DABFE:	Diplomate: American Board of Forensic Examiners
DABFET:	Diplomate: American Board of Forensic Engineering and Technology

AFFILIATIONS

Chief Scientific Advisor to HBA Global Expo

Director of HBA Technical Conference Planning

Editorial Advisory Board: Knovel Corporation

Scientific Advisory Board: Supply Side West/East: Virgo Publications

Meyer R. Rosen

CChem, CPC, CChE, CFEI, DABFE, DABFET, FAIC
Fellow: Royal Society of Chemistry (London)
Fellow: American College of Forensic Examiners

CATALYST FOR NOVEL THINKING

Meyer R. Rosen is President of Interactive Consulting, Inc. He is an expert in the field of Technical Marketing and multi-industry Technology Applications. Mr. Rosen is a skilled Meeting Facilitator who conducts Ideation sessions that enhance Strategic and Tactical Planning for Technology and Business issues. He is able to lead custom designed, multifunctional Focus Group sessions that enhance senior management effectiveness. His capabilities are grounded in a unique combination of understanding individual and group dynamics as well as a broad range of applications- oriented technology. Meyer provides attendees of his sessions with a hands-on, working knowledge of his "Visual-Listening" approach to dealing with corporate and personal effectiveness issues. The technique includes advanced training in the custom preparation of Mind-Maps[®] and their direct application in knowledge- mapping for producing communication breakthroughs. He has taken professional training in the use of Mind Mapping softwear.

Mr. Rosen has extensive experience in the practical application of fundamental principles to a wide variety of market development & technological issues associated with the Specialty Chemicals & Allied Industries. For more than thirty years, Meyer has consulted for hundreds of corporations involved in the development, optimization, marketing and quality control of new and existing products. He is also skilled at bringing together companies that have technology with companies that need it and facilitating their successful partnership.

Mr. Rosen has an exceptional ability to listen underneath what is being spoken and go to the heart of the matter regarding what is needed. He consistently demonstrates an ability to generate creative solutions and suggestions, which have made his problem- solving abilities a valued asset. Meyer was voted the "most creative, innovative and productive member of a nationally selected group of 25 top scientists and technologists during a three day Ideation program for a major specialty products company. Mr. Rosen was selected as a Vaaler Awards judge for 2003 by Chemical Processing Magazine. The awards competition honors products that improved operations or lowered costs for the chemical processing industry.

AFFILIATIONS

Mr. Rosen is a Chartered Chemist and Fellow of the Royal Society of Chemistry (London); a Fellow of the American Institute of Chemists and both a Certified Professional Chemist and Certified Professional Chemical Engineer (National Certification Commission in Chemistry and Chemical Engineering). He is an Editorial Board Member of the Knovel Corporation which provides unique interactive access to scientific data to over 600 subscribing institutions and twenty content collections. Meyer is a member of the Society of Cosmetic Chemists and the American Institute of Chemical Engineers. He is a former Director of the American Institute of Chemists and past Vice President of the Association of Consulting Chemists

INVITED SPEAKER, MODERATOR, CHIEF SCIENTIFIC ADVISOR AND DIRECTOR OF TECHNICAL SYMPOSIA FOR MAJOR TRADE SHOWS AND CONFERENCES

Mr. Rosen serves as Chief Scientific Advisor and Director of Technical Symposia for HBA Global Beauty Expo (www.hbaexpo.com). He is also the Founder, Organizer and co-moderator for HBA's Annual International Safety, Regulatory and Certification Symposia.

Meyer is a leading consultant for the Specialty Chemical and Personal Care Industry and has presented over twenty-five invited seminars. He has been Technical Advisor for the Product Development Conferences of the HBA Global Exposition at Jacob Javits Center in New York. Meyer has contributed to the HBA Global Expo for about ten years as a Session Leader in areas including, but not limited to “Exciting New Science Developments” and “New Developments in Personal Care”. He was responsible for conceiving and running a basic- training tutorial for the Personal Care Industry at HBA 2001. For HBA 2002, Mr. Rosen was a key trainer in the Master Class, “Controlled Release Systems for Cosmetics and Personal Care”. He also facilitated a one-hour session at HBA 2002 entitled, “Natural Products in Personal Care”.

Mr. Rosen has also been Moderator of the Master Class: New Developments in Delivery Systems” and the “High Performance Ingredients” Seminar at the HBA-PCITX Technical Conference (Sept. 2005) and Moderator of the “High Performance Ingredients and Emerging Technology Symposium at the 4th Annual PCITX/HBA conference (April 2006- New York City). He has been appointed Conference Chair for the First Annual HBA Regulatory Summit: Prepare your Company for the Regulatory Revolution” at the HBA Health and Beauty America Conference (Sept. 2006). This all day international conference was designed by Mr. Rosen to be a history-making, pro-active initiative to provide thoughtful, educational insights into the movements, legislation, scientific technologies and impact of current and potential international regulatory changes. Two books on the impact of REACH regulations and worldwide legislation on the personal care industry have been published by William Andrew Applied Science Publishing (now Elsevier Publishing) with Mr. Rosen as Series Editor.

Meyer has been Moderator for numerous technical conference symposium sessions on New Developments in Natural Ingredients and Products at HBA 2003 and at the Personal Care Ingredients and Technology Conference at HBA 2004 (New Developments in Skin Care & Exciting New Developments). In the latter symposium he moderated sessions on New Product Development, New Developments in Personal Care, New Developments in Skin Care and Exciting new Developments. Meyer was Moderator for the technical session on High Performance Ingredients at the PCITX Conference in April 2005. Mr. Rosen has been Session Leader for the Master Class: New Developments in Delivery System at the HBA technical conference in September 2006. In 2008, Mr. Rosen was Moderator for HBA’s Session, “Key Aspects of the Personal Care & Cosmetic Industry You Urgently Need to Know”. In 2010, Meyer moderated a Global Internet Webinar for UBM International Media entitled, “Palm Oil, Orangutans and Sustainability: A Beauty Industry Call to Action”, in which world famous Dr. Birute Mary Galdikas focused on Sustainability/Green issues from Borneo/Indonesia (450 people/38 countries).

Meyer has been the Technical Advisor for the Second Annual Global Beauty and Natural Personal Care Products Conference and a Moderator and Session Chairman at the inaugural PCITX (Personal Care Ingredients Technology Expo) in 2003 as well as the Global Beauty Conference (Latest Developments in Ingredients- June 2004). He has also been Moderator and Session Chairman for the PCITX Conferences in 2004 and 2005. Mr. Rosen has been Moderator for two sessions on “New Developments in Natural Ingredients & Products” at the 2003 HBA Global Expo Technical Conference. He was Moderator for the April 2004 PCITX/HBA Global Expo Conference on “High Performance Ingredients, High Impact Color and High Function Naturals.”

Meyer has been on the Advisory Board and was a Moderator for the Global Beauty Congress sponsored by Chemical Week Associates and Soap & Cosmetics magazine (2002 & 2003). He played a key role in the design of this major new technical/marketing conference. Meyer facilitated several technical conference sessions with more than one- hundred technologists and marketing experts. These sessions included: Personal Care Delivery Systems, Multicultural Needs of Hair and Global Market Trends for Personal Care and Beauty. Mr. Rosen was a Session Leader for the High Performance Ingredients & Emerging Technologies

Symposium (2003). Meyer managed the Symposium, "Consulting in the Next Millenium" at the ChemShow 2000 in his role as Vice President of the Association of Consulting Chemists and Chemical Engineers.

BOOK SERIES EDITOR, "PERSONAL CARE & COSMETIC TECHNOLOGY SERIES", WILLIAM ANDREW, INC. APPLIED SCIENCE PUBLISHERS, (now Elsevier Publishing) - NORWICH, NEW YORK

Books in Series include, but not limited to:

- **"Delivery System Handbook for Personal Care and Cosmetic Products: Technology, Applications and Formulations"**, Meyer R. Rosen, Editor, 1100 pages (2005)
- **"Global Regulatory Issues for the Cosmetic Industry, Volume 1"**, C.I. Betton, Editor (2007)
- **"Global Regulatory Issues for the Cosmetic Industry, Volume 2"**, Karl Lintner, Editor (2009)
- **"Nutritional Cosmetics"**, Aaron Tabor and Robert M. Blair, Editors, (2009)
- **"Cosmetic Applications of Laser and Light-Based Systems"**, Gurpreet Ahluwalia, Editor, (2009)
- **"Skin Aging Handbook, An Integrated Approach to Biochemistry and Product Development"**, Nava Dayan, Editor (2009)

NEWSMEDIA INTERVIEWS & QUOTES

As an industry leader, Mr. Rosen has been interviewed and quoted in the press by a variety of trade journals and chemical industry publications. These include: DowJones.com (Chem Show 2000), Chemical Marketing Reporter (May 12, 2003), Soap & Cosmetics (Sept. 2002), Chemical and Engineering News (March 3, 2003), The Journal of Surfactants & Detergents and Chemical and Engineering News (May 3, 2004), Women's Wear Daily (August 16, 2005), and Medesthetics Magazine (October 2005), Global Cosmetics Magazine (pg. 34, January 2006); Associated Press Television Interview on Trends in Personal Care (April 18, 2006-National Syndication), Inform (American Oil Chemist Society)- "Silicones in Fabric Care" (Vol. 17 (9) 553-516, September 2006).

Mr. Rosen's book "Delivery System Handbook for Personal Care and Cosmetics: Technology, Applications and Formulations" has an extensive book review in the Journal of the International Federation of Society of Cosmetic Chemistry, Vol 9, #3, pp 259-261 (October 2006). Meyer is also quoted in "The Informationist: Analyst for the Health Care and Beauty Industries, vol. 27, No. 9 & 10 (2007) in an article entitled: "Ingredient Regulations and Safety Concerns Face Industry". Mr. Rosen was recently interviewed by a Canadian Film Company making a bi-lingual (French and English) documentary on the impact of global regulations in the consumer product and cosmetic industries. He has also been extensively quoted by the French Press (CosmeticDesign-Europe) and SpecialChem4 Cosmetics in his role as Chief Scientific Advisor for HBA Global Expo and Director of Technical Symposia (www.hbaexpo.com).

EXPANDING TECHNOLOGY TRANSFER AT THE INDUSTRIAL-ACADEMIC INTERFACE

Meyer is committed to facilitating industrial - academic communication with the intention of advancing the art of Technology Transfer. He was appointed to serve a three- year term as Symposia Chair of the Technology Transfer and Interface Science Symposium of the Colloid and Surface Science Division of the American Chemical Society.

Mr. Rosen was co-organizer of the "Surfactant Science and Technology in Industry" Symposium at the 223rd National Meeting of the American Chemical Society in Orlando, Florida (April 2002). Meyer was Chairman of the session, "Problem Solving at the Industrial-Academic Interface". He also presented a paper at the Presidential Symposium of this meeting entitled, "The Consulting Enterprise and the Professional Certification Portal".

Meyer is co-organizer of the "Industrial Problems and the Role of Colloid and Surface Science Theory" Symposium at the 224th National Meeting of the American Chemical Society meeting in Boston, Massachusetts (August 2002). He is also Chair of the session, "Research Opportunities at the Corporate-Academic Interface".

Mr. Rosen has been co-organizer and session leader of "Colloid and Surface Chemistry of Personal Care Products and Pharmaceutical Delivery Systems at the 226th Annual National Meeting of the American Chemical Society in New York (2003). He organized and Chaired the Symposium "Colloid and Surface Chemistry of Personal Care Products and Pharmaceutical Delivery Systems" (8/03) as well as sessions on "Surfactants" and "Catalysis, Polymers".

Meyer recently was invited to attend and participate in Columbia University's Annual meeting (2002) of the Industry/University Center for Advanced Studies in Novel Surfactants.

Mr. Rosen has been involved in facilitating corporate-academic relationships designed to expand academic research and incubator technology into practical applications for industrial and specialty chemical companies.

MARKET RESEARCHER & TECHNICAL JOURNALIST

Mr. Rosen is an excellent market researcher and technical journalist. He is a member of the National Association of Science Writers. Meyer has written six technical articles for Chemical Market Reporter, two for DCI- Drug and Cosmetic Industry Magazine, eleven for Global Cosmetic Industry Magazine and one for HAPPI Magazine. He has reviewed cutting- edge technology in eight different market area segments dealing with specialty chemicals used for textile applications. Meyer has also authored a twenty- company survey on Technology Transfer into the Personal Care Industry.

He has written technical articles for the trade- press on a variety of application- oriented subjects including: organosilicones, water- soluble polymers, surfactants and emulsifiers. Meyer has published articles in the area of Technology Transfer, Silicone Elastomers and a three- part article on Delivery Systems for the Personal Care Industry in GCI Magazine. Other articles include: The Technology of Sparkling Pigments and their applications (GCI Magazine (Feb. 2003), a two part article on Super (Naturals) & Botanicals (GCI Sept. & Nov. 2003), one on "Beyond the SPF Factor in Sunscreens for Hair & Skin" (GCI Feb. 2004) and one on Hair Care Styling Polymers (GCI June 2004).

Meyer is able to obtain information required for custom market research studies tailored to individual client needs. His strong technology base is an asset for the assessment of commercial, scientific and medical technologies. He also is able to identify and pre-qualify expert consultants for clients with specially defined market research needs. Meyer's analytical abilities are valuable in determining whether market opportunities exist for commercially based technologies. Meyer demonstrates a high level of creativity in generating new product breakthroughs. He is well known for "Out of the Box Thinking". His analysis of market segment growth in both emerging and unmet needs enables Meyer to define future market opportunities and technical support required for success.

Meyer created a novel market research analytical technique called "Formulation Mapping" which he introduced to the Personal Care Industry in an article entitled, "Personal Care

Formulations: Behind the Scenes". The premise of the technique was favorably accepted by the industry and adopted for an annual review in an article entitled 'Formulations '99...Innovation for the Next Millennium".

AUTHOR & BOOK EDITOR

Meyer has authored four books and has numerous publications in peer reviewed scientific and engineering journals. He is an expert in the area of high molecular weight water-soluble polymers and co-author of the "Rheology Modifier Handbook - Practical Use and Application". The 500 page Handbook includes information on 20 different types of rheology modifiers manufactured by 26 worldwide companies. These materials range from synthetic polymers such as poly (ethylene oxide) to natural gums and resins such as water-soluble polysaccharides.

Meyer is the Editor of the successful, internationally well-reviewed "Handbook of Delivery Systems: Technology, Applications and Formulations" The 1,100 page book has over 80 authors, from ten countries and over 40 companies. It combines elements of technology transfer and sparks the generation of new product concepts for the practical use and application of this technology in the personal care industry.

Mr. Rosen is Series Editor for William Andrew Applied Science Publishers (now Elsevier Publishing (www.williamandrew.com)) and is responsible for generating numerous technical books in his "Personal Care & Cosmetics" Book Series. This series includes, but is not limited to: Personal Care, Cosmetics, Pharmaceuticals, Cosmeceuticals, Biochemistry based products, processes and applications.

Mr. Rosen is a reviewer for "The Chemist", published by the American Institute of Chemists as well as the Journal of Chemical Education. As a recognized expert in the chemical industry, Meyer was invited to answer questions in the dowjones.com on-line forum. He also writes regularly for Chemical Market Reporter and Global Cosmetic Industry and HAPPI Magazine. He has authored numerous articles requiring extensive research and interviewing skills. These include topics such as: Polymers for Water Treatment, Specialty Chemicals for Textiles, Detergent Polymers, Surfactants used in the Detergent Industry, Specialty Chemicals for Textiles and a Review of the Non-Wovens Industry.

Meyer's research on specialty chemicals for textiles included the following market segments: dyes, sizes and thickeners, scouring agents, lubricants, flame retardants, softeners, whiteners, durable press resins and water, oil and soil repellants. He has also authored articles on organosilicones for hair and skin conditioning for DCI Magazine and Global Cosmetic Industry Magazine. Mr. Rosen has also recently authored articles on novel silicone elastomers and gels as well as Delivery Systems for use in the Personal Care Industry.

Mr. Rosen published an article entitled, "Silicones for Personal Care: Technology Focus" which appeared in Global Cosmetic Industry (GCI) Magazine. He has also published an article entitled, "Silicone Innovation for Hair Care" in the May '02 issue of GCI and one on "Skin Care that Really Works" in the May 2003 issue of GCI. His article "Mane Protection" (Hair Care) was published in the February issue of GCI Magazine.

Meyer has published numerous technical advertising literature pieces that have had worldwide circulation. This includes most of the Union Carbide Corporation's literature on POLYOX Water Soluble Resins and rheological literature for Brookfield Engineering Laboratories. He has also published four books and over forty articles in the technical and scientific literature. Meyer is the coauthor of the "Rheology Modifier Handbook- Practical Use & Application" (William Andrew Publishing, Norwich, N.Y.). Currently, Meyer is Editor of the forthcoming 1,000. -page book, "Delivery System Handbook for Personal Care and Cosmetic Products: Technology, Applications and Formulations", which covers over 40 different delivery system technologies, with

contributions from over 80 authors from ten countries. He is also Series Editor of "Breakthroughs in Personal Care, Cosmetic and Pharmaceutical Technology" for William Andrew Publications: generating a series of books dedicated to transforming the content and communication (via book and internet) of the status of technology in the Personal Care and Pharmaceutical Industry.

CONTINUING PROFESSIONAL EDUCATION

"Colloids and Surfaces, Nanoparticles, and Green Technology 2009", November 17-19, 2009, Javits Convention Center, New York City

"Global Perspectives on Environmental Risk", Allen & Overy, LLP (Continuing Legal Education Program), New York City, (October 20, 2006).

Skin Science for the Cosmetic Chemist (New York Society of Cosmetic Chemistry) (November 17-18, 2004).

Conference on Applied Hair Science, TRI, Princeton, New Jersey (June 2004)

AREAS OF TECHNOLOGY EXPERTISE

ORGANOSILICONES: SURFACTANTS/WETTING AGENTS, EMULSIONS, FOAMS, GELS, ANTIFOAMS, SILANE COUPLING AGENTS

Meyer has fifteen years research and development experience in the field of organosilicone chemistry. He is knowledgeable in the theory and practical application of surface-active agents including organic, silicone and fluorocarbon types. Meyer is skilled in the art and science of stabilizing silicone emulsions of both the oil-in-water and water-in oil types. Mr. Rosen has developed methods for measuring and improving the stability of silicone emulsions and was involved in the optimization of emulsification processes for oil-in-water silicone emulsions and water-in oil poly (acrylamide) emulsions. He has authored papers on the prediction and detection of incipient agglomerate creaming in emulsions and has successfully used the fundamentals of non-Newtonian rheological behavior to predict silicone emulsion instability.

Meyer has been involved in the optimization, stabilization and development of amino-based silicone-based water-in-oil emulsions for car polish applications. He has developed silicone emulsions for aerosol spray starch applications. Meyer has consulted on the effect of organosilicone surfactants as flame-retardants for polyurethane foam and conducted research on improving fuel combustion efficiency by altering atomization characteristics using organosilicone copolymers. He has conducted applied research in many novel applications of both organosilicone and organic surface-active agents. For five years, Meyer was responsible for generating new product ideas and guided several Ph.D. synthesis chemists in the design of new organosilicone surfactants and polymers based on correlations he developed between structure and performance. During this period he developed organosilicone surface-active agents that improved droplet atomization and combustion efficiency of diesel fuel and # 6 oil.

Mr. Rosen has done extensive research and development in the area of both industrial and food grade antifoams. This work has included the development of new silicone antifoam products as well as simple test methods for their detection and efficacy. When faced with a new and unstable silicone antifoam product, Meyer invented the concept of "transient" antifoam, which takes advantage of the inherent instability for high-speed packaging of foaming fluids. He holds patents on "Non-Aqueous antifoam compositions", "Transient antifoams" and "Self-dispersible antifoam compositions". Mr. Rosen is fully familiar with the process technology for antifoam manufacture and the major silicone antifoam producers. Meyer has published on the area of antifoams in the J. Soc. of Cosmetic Chemistry

Meyer has studied and developed AFFF aqueous foams based on novel organosilicone copolymers. These are widely used today for extinguishing hydrocarbon fires associated with civilian and military aircraft fires. This technology requires knowledge of fundamentals associated with the spreading of one fluid upon another. He holds two patents on fire extinguishing foams: "Method of extinguishing fires and composition containing cationic silicone surfactants" and "Method of extinguishing liquid hydrocarbon fires and compositions therefore comprising silicone surfactants".

Mr. Rosen has been an Adjunct Professor at Westchester Community College and trained senior firefighters in the chemistry and physics of fire science. He has developed methods of measuring and improving the stability of aqueous foams. Meyer is a member of the National Fire Protection Association and a former member of the standards-making Fire Fighting Foam Subcommittee. He is also a member of the ASTM Committee on Fire Extinguishing Agents.

Meyer has published a major review of Silane Coupling Agent Technology: "From Treating Solution to Filler Surface and Beyond- The Life History of A Silane Coupling Agent and has extensively studied methods of altering the surface of materials such as clays and silica's of all types. He has also authored an article on silicones for hair conditioning in DCI Magazine.

WATER SOLUBLE POLYMERS GUMS AND RESINS, POLY (ETHYLENE OXIDE), POLYETHYLENE GLYCOL, POLYACRYLAMIDE

As Development Engineer for Union Carbide Corporation, with responsibility for World Wide Technical Support of POLYOX® Water Soluble Resins, Meyer provided each year, for over five years, outstanding technical support and problem solving for hundreds of major domestic and international corporations for systems using POLYOX poly (ethylene oxide) and CARBOWAX polyethylene glycol. . He has developed major new consumer applications for poly (ethylene oxide) including improved lubricity of the Gillette Razor Shaving Strip and aqueous-based lubricants for the clay-steel interface. Mr. Rosen was the developer of pelletizing technology for powdered poly (ethylene oxide) that enabled its initial use in thermoplastic extrusion and blown film processes.

Meyer has consulted on the use of hydrogels for improving the lubricity of surgical gloves. His work with a major detergent manufacturer culminated in the introduction of a detergent product with significantly improved anti-redeposition properties. Meyer was also a consultant on "Rapid Water", a novel high molecular weight polymer product useful for decreasing the drag reduction of water in fire fighting hoses. He has consulted on the development and application of novel hydrogel systems used for growing plants, "second skin" and water-soluble packaging for insecticides and detergents. Meyer has also developed novel blends of thermoplastic water soluble and water-insoluble high molecular weight polymers. This work resulted in novel packaging films with hydrophilic properties. Such films have been used for packaging of detergents and toxic agricultural products.

Meyer holds the patents: "Process for forming ceramic bodies employing aqueous lubricants", "Shaped articles for conditioning hair fabricated from quaternary nitrogen-containing cellulose ether" and "Shaped article for conditioning hair- a blend of water-soluble and water insoluble polymers with inter-penetrating networks." These patents are each concerned with the effects of high molecular weight polymers, both water-soluble and water insoluble, and their behavior at interfaces. Meyer has worked closely with synthesis chemists in the development of water-in-oil (i.e.: inverse) emulsions containing high molecular weight poly (acrylamide) anionic and amphoteric copolymers and terpolymers. He holds a number of patents in this area, as well.

Mr. Rosen has reviewed and summarized over twenty- five years of the technical literature on poly (ethylene oxide). His work resulted in a major revamping and reissue of all of the Worldwide Technical Advertising Literature on POLYOX® Water Soluble Resins. This included handling, applications, safety and toxicological aspects. His publications on the usefulness of POLYOX® Resins include: "Thermoplastic Processing", "Association Compounds", "Applications", "Dissolving Techniques", "Storage and Handling", "Environmental Impact", "Dust Properties", "The Basics" and "Toxicological Properties".

Mr. Rosen is fully familiar with the solution properties of water- soluble polymers and gums and the effect of concentration on the properties of such solutions. His knowledge of molecular domains formed in concentrated solutions of such polymers has been of use in addressing processing issues related to concentrating such solutions to powder form by means of spray drying systems.

Meyer has directed laboratory and field development programs. These included new high molecular weight poly (acrylamide) and poly (ethylene oxide) flocculants for industrial clay dispersions, taconite (iron) ore binders and phosphatic slimes (montmorillonite/attapulgitite clay) consolidation and strengthening of highly concentrated systems. In the latter area, Meyer provided consultation to the United States Bureau of Mines. His work in the environmental aspects of mining area was the basis for his appointment as a Fellow in the Royal Society of Chemistry (London).

Mr. Rosen has also been a member of the American Institute of Mining Engineers and a former Symposium Chairman of the Flocculant/Surfactant Session. He has patented a "Process for producing a polymer-in oil emulsion". Meyer also published "An Improved Method for Consolidation of Phosphatic Slimes" which appeared as a major chapter in the Engineering Foundation's book, "Flocculation and Dewatering".

COLLOID AND SURFACE CHEMISTRY: STABILITY OF DISPERSIONS, WETTING & SPREADING PHENOMENA, SUSPENSIONS & EMULSIONS, CLAYS, PAINT & COATINGS, PERSONAL CARE, COSMETICS

Meyer has spent many years studying the fundamental properties of finely divided materials and their behavior in liquid mediums. He is an expert at making such materials stable and using rheological techniques to measure key properties, which produce this result. Meyer has developed stable, non- aqueous liquid color toners based on fluorocarbon liquids for three-dimensional Xerox process under a grant from the Naval Weapons Test Laboratory. He has been involved with the optimization of the stability of water-in-oil Polyacrylamide flocculant emulsions and development of stable, rapidly dissolving slurries of poly (ethylene oxide) based on thickened mineral oil.

FLOCCULATING AGENTS

Meyer has published an article entitled, "An improved method for consolidation of Phosphatic Slimes" and authored a chapter in the Engineering Foundation's book, "Flocculation and Dewatering". Meyer has published on the creaming phenomenon in silicone emulsions. He also holds several patents in the area of polymer water-in-oil emulsions as well as: "Slurries of Poly (ethylene oxide)", "Rapidly dissolved water soluble polymer composition" and "Process for forming ceramic bodies employing aqueous lubricants".

Meyer invented a new use and process for binding mineral ores using liquid poly (acrylamide) polymers. His publications in this area include "Carbinder Polymer 498: A New Organic Binder for Taconite Ore". Mr. Rosen managed a staff of four in a two-year lab/field product development program and successfully optimized complex multivariable performance properties while developing a novel pelletizing process for Taconite (iron) Ore. This process was commercially adapted on a large industrial scale by Erie Mining Company, the second largest

mining company in the U.S. He also managed a five-year lab/field development program for the use and application of new poly (acrylamide) and poly (ethylene oxide) high molecular weight polymers for the flocculation and clean- up of Phosphatic Waste Slimes in Florida.

Mr. Rosen has been a member of the American Ceramic Society and the American Institute of Mining Engineers. Meyer has consulted for major ceramic companies involved in the preparation of highly concentrated systems. His successful work on Taconite Ore binding and enhancement of green strength was featured as the lead story in the "Pride" issue of Union Carbide World Magazine- "The Carbinder 498 Success Story- Two Man Team Defies Three-Dog Nights". Meyer has written an article on Water Treatment Polymers for Chemical Market Reporter. He holds several patents in this area including: "Process for agglomerating ore concentrate utilizing clay and dispersions of polymer binders or dry powder binders; "Process for Agglomerating ore concentrate utilizing clay and dispersions of polymer binders or dry powder binders"; "High molecular weight water soluble polymer and flocculating method using same"; "High Molecular weight water soluble polymers"; "Polymer water-in-oil emulsions" and "Process for forming ceramic bodies employing aqueous lubricants."

APPLIED RHEOLOGY & DESIGNED PRODUCT FLOW BEHAVIOR

Meyer is an internationally known rheologist. He is the developer of the Shear Thinning Index (STI) Standard Test Method cited in ASTM D-2196, "Standard Test Method for Rheological Properties of Non-Newtonian Materials by Rotational (Brookfield) Viscometer. Meyer's experience includes methods for the optimization of the rheological properties of non-newtonian, agglomerated dispersions in order to maximize their stability. He is the author of an in-depth review of the mathematical models of non-newtonian fluids and their practical use in the optimization of both aqueous and non-aqueous dispersion stability. Meyer developed rheological testing protocols to characterize and optimize the wetting, spreading and penetration phenomena associated with knife coating silicone surfactant stabilized polyurethane foamed coatings onto textile substrates used for carpet backing and other substrates. Mr. Rosen has completed a review of patented technology in the area of gelling agents for silicone- based antiperspirant sticks and gels and reviewed emerging technology in the area of surfactants used in skin and hair- contact personal care and home care formulations. Meyer is named as an inventor on a US and European patent entitled, "Fumed Silica Embolic Compositions" which is related to the development of designed rheological fluids useful in brain neurosurgery for embolizing vascular sites and treatment of aneurysms, arteriovenous malformations and other vascular diseases.

Meyer has over thirty year's background in the practical application of rheological principles for solving industrial problems. He has published papers in peer reviewed journals including "A Rheogram Template for Power Law Fluids: Technique for Characterizing the Rheological Properties of Emulsions and Polymer Solutions," and "Approximate Rheological Characterization of Casson Fluids: Template Method for Brookfield Synchro-Lectric Viscometers". His rheological work is extensively quoted in the Encyclopedia of Polymer Science and Engineering. Meyer has been a consultant for Brookfield Engineering Laboratories and is a key contributor to Brookfield's worldwide technical literature entitled, "More Solutions to Sticky Problems". Mr. Rosen provides training seminars in practical applications of rheology.

Meyer has directed a water-soluble polymer applications laboratory for more than 15 years and developed many novel products and applications by his practical use of rheological principles for solution of real-world problems. He has also assembled, classified and authored an in-depth review of over one hundred articles on mathematical models of liquid flow behavior in an article entitled: "Characterization of Non-Newtonian Flow".

Meyer is a member of the ASTM Committee on Paint and Related Coatings. He has published a novel paper entitled, "Hair Conditioning by a Chemical Comb" in which the flow behavior of water-soluble polymers plays a key role in their hair conditioning action. He has also published an article entitled, "Estimation of Molecular Weight Error for Concentration

Uncertainty in the Intrinsic Viscosity Determination" and copyrighted the "Viscosity Calculator Slide Rule" for the Brookfield Synchro-Lectric Viscometer.

Meyer has presented invited seminars on rheology at: the 17th Mid-Atlantic Regional American Chemical Society Meeting: "An Introduction to Rheological Characterization of Non-Newtonian Fluids and Some Practical Applications; the National Meeting of the Society for Cosmetic Chemists: "Principles of Applied Rheology"; and the Applied Rheology for Industrial Chemists Symposium- Kent State University: "Characterization of Non-Newtonian Fluids- An Industrial Viewpoint.

RHEOLOGICAL MODIFICATION OF NON-AQUEOUS MEDIA

Meyer has been involved in the development of a range of products which require altering flow behavior of non-aqueous fluids including, but not limited to: mineral oils, silicone oils, anti-perspirant compositions, foamed engine degreasers, esters and fragrances. Product experience includes neat fluids as well as water-in-oil emulsions where the oil phase requires thickening.

LUBRICANTS

Mr. Rosen has had experience in the development of a wide range of novel lubricant applications. These include, for example, development of the lubricating strip used in Gillette razors, and is co-inventor of two U.S. patents on nanofoams containing poly(ethylene oxide) as a flexible lubricant delivery system for shaving (U.S. 2008/0216321 A1- Sept. 11, 2008; US2008003018). He has also developed aqueous based lubricants for use at the clay/steel interface during the manufacture of bricks, molybdenum disulfide lubricants in water-soluble poly (ethylene oxide) films and drag reduction in aqueous media. Mr. Rosen is familiar with the application of high molecular weight polymers for the enhancement of aqueous- based cutting fluids.

MEDICAL TECHNOLOGY

Mr. Rosen was involved in the development of poly (ethylene oxide) technology for use in controlled release drug systems. Meyer has been a consultant to top molecular genetic researchers in the lung cancer field. He has provided guidance on the development of optimal techniques for the preservation of morphology, protein and nucleic acid (RNA and DNA) markers in exfoliated sputum cells. Mr. Rosen has also been an active participant in six annual International Conferences on Screening for Lung Cancer. Meyer has consulted for Medical Device companies engaged in development of novel surgical techniques. Mr. Rosen is an inventor on a U.S and European patent entitled "Fumed Silica Embolic Compositions". This invention relates to the development of novel treatment of aneurysms in the brain during neurosurgery (2005).

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