

#### Volume XXXII, Number 1

March, 2019

#### 2019 Southeast Chapter Officers

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# Southeast Chapter Speaker Dinner Meeting Thursday, March 21, 2019 Wine, Roses, and Chocolate

Nelson Ayala, Ph.D. Distinguished Toastmaster

#### The Feed Co., Table and Tavern 201 West Main, Street Chattanooga, TN 37408

5:30 pm to 6:30 pm - Registration and Cocktails

<u>Cocktail Hour Sponsored by Colonial Chemical</u>

6:30 pm - Dinner

7:30 pm - Presentation

\$50 - SCC members \$45 - Retired SCC members \$60 non-SCC members

RSVP by noon, Monday, March 18, 2019 to Tami Thomas, (423)602-3088 or by email to tami@colonialchem.com



Inside this Issue...

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#### Wine, Roses, and Chocolate

The challenge (and the joy) of the cosmetic chemist is to create products that have exquisite appeal for their consumers. We will explore the sensorial aspects that make products successful. The audience will have an opportunity to taste wines, chocolates, and smell natural herbs. We will learn more about the art and science of evaluating tastes and scents, which will add greatly to our enjoyment of the finer things that we will be tasting and smelling.

#### Biography of Nelson Ayala, Ph.D., Distinguished Toastmaster

Nelson was born in New York City and graduated from the Bronx High School of Science, Brooklyn College with a BS in chemistry, SUNY Stony Brook with a MS in chemistry, Lynchburg College with a MBA, and UVA with a Ph.D. in physical chemistry. As a Ph.D. graduate of University of Virginia, he got his first taste of Virginia in the 80's. In the 90's, he was a tour guide at the Brotherhood Winery in Washingtonville, New York, which is the oldest continuously operating winery in America. His interest in sensory science has fed his creativity in his career; Nelson has worked to create new consumer products that either taste good, smell good, or feel good on the skin. He has worked in new product development on consumer products at Unilever, Westwood Chemical, Carter Wallace, Fleet Labs, and Prestige Brands. He is currently a consultant for Unicus Pharmaceuticals, LLC, which is engaged in launching naturally inspired products for skin, nails, and hair. He has patents on taste masking, oral rehydration, anti-itch, antiperspirants, and deodorants. He has authored several papers in major journals. Nelson has been a member of the Society of Cosmetic Chemists in the New York and Virginia sections. As a member of Toastmasters International since 1990, Nelson enjoys making presentations on topics related to health, beauty, and career/personal development.

#### The Feed Co., Table and Tavern

201 West Main, Street, Chattanooga, TN 37048

Located in Chattanooga's thriving Southside, The FEED Co. is an artful combination of tavern and family dining with a stunning destination, and an inviting farm fresh menu.

Our neighborhood restaurant offers a seasonal menu of inventive farm fresh cuisine cooked simply and deliciously in a warm and inviting atmosphere by executive chef, Charlie Loomis.

FEED Co.'s interior, designed by the award-winning Cogent Architects, pays tribute to the old bones of the historic Chattanooga's Seed-Feed Supply Co. and updates it into a cozy series of rooms that temper elegance with rustic finishes.









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**Employment Opportunities:** Please check our website for detailed job listings at <a href="http://www.southeastscc.org/Employment.html">http://www.southeastscc.org/Employment.html</a>

#### Message From the Chapter Chair

Dear Members & Friends,

I hope everyone had a wonderful start to the New Year!

Congratulations! and welcome to our 2019 Chapter Officers.

First and foremost, I would like to thank everyone for giving me an opportunity to serve as the SCC Southeast Chapter Chair. I have been associated with SCC for over 8 years now and feel honored to serve as a Chapter Chair.

After successful 2018, we are looking forward to another great year for our chapter. We will be hosting our first meeting of the year in Chattanooga, TN on March, 21st at Feed Co. Table and Tavern, located at 201 West Main Street. Our guest speaker Dr. Nelson Ayala has a very informative and interactive presentation planned for us. His presentation on "Wine, Roses, and Chocolate" will give us an opportunity to understand various sensorial attributes of successful cosmetic product development. Along with a very interesting presentation you will also get an opportunity to taste wines, chocolates, and smell natural herbs. Thanks! to Colonial Chemical for Cocktail hour sponsorship. Also, a very special thanks to Christine Anderson from Colonial Chemical for coordinating the Chattanooga meeting.

Followed by the March meeting, our other chapter meetings will be held in April, June, October and November. Please check the event calendar for more information. Our June meeting will be supplier social dinner and we would like to extend sponsorship opportunities to all our suppliers for the event. Vendor sponsorship has always been a critical part of our supplier's night success. Please check the sponsorship page (5) of our newsletter for more information regarding various sponsorship tiers. In addition to the supplier social event, we have several other sponsorship opportunities for our suppliers including newsletter advertisements, cocktail hour sponsorships and door prizes at the supplier social event. If interested, please reach out to me directly or to Cathy Anglin (SCC Southeast Chapter Newsletter Editor) for additional information.

A friendly reminder to all our current members to renew their annual membership if haven't already. SCC provides a great platform to all its members to enhance their professional skills and growth opportunities in the industry. Please encourage your colleagues to join our chapter. Also, under SCC's ongoing NextGen initiative all student members will get FREE membership opportunity for the first year. I would like to request all our current members to encourage local universities to get their students enrolled under this program.

Last but not the least, we have decided to include two additional committees this year at the chapter level:

**Constitution & Bylaws Committee (Chapter Level):** The primary responsibility of this committee would be to review the Chapter Bylaws annually and make recommendations to the Chapter Board.

**Nomination & Election Committee (Chapter Level):** Primary responsibility would be to recruit volunteers for elected office.

If interested, please reach out to me directly for more information.

Thank you once again and I look forward to seeing you at our scientific dinner meeting on March 21st in Chattanooga.

Sincerely,

Avantika Bandopadhya

SCC Southeast Chapter Chair

















#### **Sponsorships Available!**

Sponsorship opportunities are available for our Supplier's Day Social Event on June 20, 2018. Even if the venue has not been finalized, please plan to join us in the Memphis area for an enjoyable evening with friends and coworkers. Sponsorships are available at Platinum—\$600, Gold—\$350, and Silver—\$150 levels. (If your company is interested in sponsoring this or any other SE Chapter Event, please contact: Avantika Bandopadhya, <a href="mailto:abandopadhya@jstrickland.net">abandopadhya@jstrickland.net</a> or Cathy Anglin, <a href="mailto:canglin@jstrickland.net">canglin@jstrickland.net</a>.



#### Pictures from SCC SE Chapter Officer Installation, November, 2018



#### **Outgoing 2018 Chapter Officers**



Avantika Bandopadhya, Cubie Lamb, Molly McEnery and John Wagner

#### 2019 Chapter Officers



Tami Thomas—Secretary, Dennis Abeduto—Area IV Director, Cubie Lamb—Chair Elect, Molly McEnery—Treasurer and Avantika Bandopadhya—Chair.



John Wagner receives a distinguished service award from Cubie Lamb for his years of dedication to the SCC Southeast Chapter.



Long time members and former SE Chapter Chairs, Cathy Anglin, John Wagner and Paul Allen.

Dennis Abeduto, Area IV director and member of the SE chapter delivers the State of the Society presentation and installs our 2019 Officers.





### Ninth Biennial Holistic Cosmetic Symposium - March 12 &13, 2019

Twin Cities Chapter - 9th Biennial Holistic Cosmetic Symposium

https://www.tccscc.org/holistic-symposium-2018

Location: DoubleTree Hotel 1500 Park Place Blvd Minneapolis MN http://doubletree.hilton.com

Day 1 Agenda: Tuesday, March 12

8:00 – 9:00 am CEP Check-in and Continental Breakfast

9:00 – 12:00 am Dr. Robert Lochhead CEP Course

AM Session -Polymers in Cosmetics & Personal Care Products

12:00 – 1:00 pm LUNCH

1:00 – 5:00 PM Session -Polymers in Cosmetics & Personal Care Products

Day 2 Agenda: Wednesday, March 13

7:00 – 8:00 am REGISTRATION & CONTINENTAL BREAKFAST

8:00-1:00 pm SPEAKER SESSION

Maryellen Mollyneaux, NMI

Jack Corley, Custom Essence

Mindy Green, Green Scentsations

Dr. Michael Wentzel, Augsburg University

Dr. Neelam Muizzuddin, SCR Consultants

David Steinberg, Steinberg & Associates

1:00-1:30 pm LUNCH

1:30 – 5:30 pm SUPPLIER EXPO

6:00 – 9:00 PUNCH BOWL SOCIAL

1691 Park Place Blvd, Minneapolis, MN 55416

#### **Cringeworthy Chemistry Jokes**

Why does hamburger have lower energy than steak? Because it's in the ground state.

How did the blonde define hydrophobic on her chemistry exam? Fear of utility bills.

## 10 Science Topics for Cosmetic Chemists That Were Barely Covered in College

#### Article by: Perry Romanowski

The way chemistry majors typically begin their <u>chemist careers</u> goes something like this. In their senior year of college they start looking through the newspapers for any company looking to hire chemists. Next, they put together a resume, send in a bunch of applications and hopefully get hired. If they happen to apply to a company in the cosmetic industry, then they become cosmetic chemists.

Unfortunately, this method of not knowing what industry you will end up in leaves you ill-prepared for a job in cosmetic chemistry. Most of the stuff you learned in college will not be applicable to your job. To help bridge the gap, here are the top 10 science topics you should know about when entering the cosmetic industry. Study up before your first interview!

#### **Surfactants**

<u>It</u> is amazing how little time is devoted to surfactants in college when you consider the importance they play in so many industries.

What are they? Surfactant is a shorter way to say "surface active agent". These are molecules that have the property of reducing surface tension, thereby allowing oil and water to form stable (temporarily) mixtures.

**Examples** — Sodium Lauryl Sulfate, Cocamidopropyl Betaine, Glycol Distearate, Ammonium Laureth Sulfate, Polysorbate 80



Why are they used? Surfactants are used for various purposes in cosmetic formulas including

- \* Detergents for cleansing
- \* Wetting agents for helping formulas spread more easily
- \* Foaming agents to produce consumer friendly suds
- \* Emulsifiers to create stable mixtures of oil and water
- \* Conditioning agents to improve the surfaces of hair and skin
- \* Solubilizers to help mix fragrances into water-based formulas
- \* Preservatives to keep cosmetics microbe-free
- \* Special Effects to improve the look of certain formulas

Where can you learn more? We'll write more about surfactants in the future but for a quick primer on the subject, see this book on <u>surfactants</u> on Google. For a more general discussion of surfactants, start with the <u>Wikipedia surfactant</u> page.

#### **Emulsions**

This topic is related to surfactants and covered even less in college. Yet emulsions are one of the most important types of mixtures / product forms you will encounter in the cosmetic industry. (Cont. on p.9)

**What are they?** An emulsion is a fine dispersion of one insoluble liquid in another. In the cosmetic industry, the most common emulsions are ones in which oil is dispersed in water. To create emulsions, typically a surfactant is also used.

Why are they used? Emulsions are delivery systems for beneficial cosmetic ingredients. These ingredients are often incompatible with water and have undesirable aesthetic characteristics by themselves. The ingredients are mixed with water to create creams or lotions.

Where can you learn more? Look for upcoming articles on Chemists Corner about emulsions, but until then, you can see this on Google for more information. For a more general discussion of emulsions, see this emulsion entry.

#### Fatty Acids

While much college time was devoted to learning about acid-base reactions and equilibrium constants, very little time was spent looking at the properties and chain length distributions of specific acids. Those topics are much more important to cosmetic chemists.

**What are they?** As you learned in college, a fatty acid is a carboxylic acid with a long hydrocarbon "tail". They are typically derived from biological sources and thus have an even number of carbon atoms. The most important fatty acids in the cosmetic industry are those that have between 8 and 22 carbons.

Examples: Lauric Acid, Palmitic Acid, Oleic Acid, Stearic Acid, Behenic Acid

**Why are they used?** Fatty acids are the basis for many of the surfactants used in cosmetic products. They are derived from natural oils such as coconut, palm kernel, sunflower, wheat germ, etc. They are used for the following properties in cosmetics.

- \* Conditioning agents to improve the surfaces of hair and skin
- \* Thickening to make thin products more creamy
- \* Secondary Emulsifiers to help create stable mixtures of oil and water
- \* Opacifying agents to make formulas look more luxurious

Where can you learn more? You can find information about Fatty Acids in the following <u>fatty acid</u> <u>book</u> and a <u>general discussion here</u>.

#### **Silicones**

In college an entire course is devoted to hydrocarbon chemistry which is important. But almost no mention is made of silicone compounds and their usefulness in formulating.

What are they? Silicones are compounds that have a molecular backbone of -[-Si-O-]x- surrounded by hydrogens or methyl groups. They are manufactured from silicon dioxide taken from sand or other minerals. They are also known as polysiloxanes reflective of their polymeric nature.

Examples: Dimethicone, Cyclomethicone, Amodimethicone, Cyclopentasiloxane, Silicone oil

(Cont. on Page 10)

**Why are they used?** Silicones have a number of properties that make them useful to cosmetic formulators. They are amazingly slick, slippery and can make surfaces look shiny. Some applications include

- \* Conditioning agents to improve the surfaces of hair and skin
- \* Opacifying agents to make formulas look more luxurious
- \* Shine agents to increase hair shine and give gloss to skin
- \* Defoaming agents to reduce foam in cleansing formulas
- \* Occlusive agents to help moisturize skin
- \* Slip agents to help skin formulas spread more easily
- \* Hair detangling agents to make hair easier to comb

Where can you learn more? There are entire organizations devoted to promoting the safe use of silicones. You can learn some general information about silicone chemistry from the Silicones Environmental, Health and Safety Council of North America (SEHSC). For more specific cosmetic uses see the Dow Corning web page. Of course, silicones will be a topic we explore in more detail later.

#### **Polymers**

Polymers are mentioned all throughout your college chemistry courses but the focus is on the molecular structure and how to synthesize them. In the cosmetic industry, structure is much less important than polymer properties.

What are they? As you've no doubt learned, polymers are macro molecules made up of repeating monomer units. The molecule generally has a long chain backbone with side groups that modify its properties. Homopolymers are made up of a single type of monomer while copolymers have two or more monomer starting units. They can be synthetically derived or obtained from natural sources (then chemically modified).

**Examples**: [Natural] Polysaccharides, cellulose, starch, xanthan gum. [Synthetic] Polyquaternium-7, Polyquaternium-10, PVP

Why are they used? Polymers can be used to create a full range of effects in cosmetics. They can be used as thickeners, conditioning agents, formula stabilizers, styling ingredients, and even preservatives. The following are some examples but do not represent all uses for polymers.

- \* Thickeners to modify the viscosity of a formula
- \* Formula Stabilizer to help keep emulsions stable
- \* Conditioning agents to improve the surfaces of hair and skin
- \* Opacifying agents to make formulas look more luxurious
- \* Preservative to prevent microbial growth
- \* Occlusive agents to help moisturize skin
- \* Styling agents to hold hair styles in place

**Where can you learn more?** For a general refresher on polymers, the <u>Wikipedia polymer entry</u> is good. For something more specific to cosmetics, see <u>Principles of Polymer Technology in Cosmetics and Personal Care.</u>

(Cont. on p 11)

#### **Skin Biology**

As science majors you no doubt took some biology courses. Unfortunately, there are so many topics to cover like genetics, biochemistry, evolution, and classification systems, there is almost no time to go into specifics of human biology. Even in your human anatomy classes, the topic of human skin is only briefly covered. We can't cover everything here but from a cosmetic standpoint, here are some important facts to consider.

- 1. Skin is made up of two layers Dermis (inner layer) & Epidermis (outer layer)
- 2. As skin grows, cells in the epidermis die off and are pushed to the surface by new cells created in the dermis.
- 3. Dead skin cells are eventually shed and flake off.
- 4. The less moisture there is in the outer layer, the dryer skin feels
- 5. Skin products are designed to keep moisture in the outer layer and improve skin's condition.

Of course, there are many more skin topics to cover like acne, age spots, wrinkles, etc. but those will be things to learn along the way.

Where can you learn more? A good starting point is the book <u>Handbook of Cosmetic Skin Care</u>.

#### **Hair Biology**

While you might have picked up a few facts about human skin, you were exposed to even less about human hair in your biology courses. Yet one third of the products launched in the cosmetic industry are formulated for hair. We'll expand on hair biology in the future but the basic facts you need to know are the following.

- 1. Hair is made of keratin protein.
- 2. Hair has two important layers called the cortex (inner layer) and cuticle (outer layer)
- 3. The cuticle is responsible for the appearance and feel of hair.
- 4. The cortex is responsible for hair strength and flexibility

Where can you learn more? You can get a limited preview of a couple excellent books on the subject of hair biology. The Science of Hair Care and Hair and Hair Care.

#### Microbiology

Every biology major took some type of microbiology class. You probably touched on many micro organisms, even some that can contaminate cosmetic products. But while you were learning to grow E. Coli in a Petri dish, you weren't learning the most important aspect of microbiology to a cosmetic chemist; how to use preservatives to keep your cosmetic formulas microbe-free.

The primary preservatives used in the cosmetic industry include parabens and formaldehyde donors. Much has been written decrying the use of these ingredients but they are necessary to ensure the safety of cosmetics.

#### **Chemical Nomenclature**

Naming of chemicals is introduced in your first year of college and expanded upon when you take Organic Chemistry. You are taught the proper IUPAC system which allows you to figure out chemical structures from names. Here's a surprise. Only a tiny fraction of that knowledge will be useful in the cosmetic industry. In this industry, we follow the naming conventions of the INCI. To learn more, you can see this article about making the transition from the <u>IUPAC to the INCI</u>. (Cont. on p. 12)

#### **Stability Testing**

Unless you spent time volunteering for a professor who worked with proteins, you probably haven't even heard the term stability testing. When you first start out your career, these may be the most common tests you have to run. Stability tests are studies set up to determine what effect storage at different environmental conditions will have on the formula. Samples of your product are put at elevated temperatures, freezing temperatures and exposed to different types of light. This gives an indication of what the product might look like after sitting on store shelves and in consumer's bathrooms. The formulator's goal is to always produce long-lasting, stable products.

This is just a brief synopsis of some of the most important science topics you need to know to work as a chemist or formulator in the cosmetic industry. If you are just graduating college, this will be an excellent primer for your first interviews.

#### **About the Author**

<u>Perry Romanowski</u> has been formulating cosmetic products and inventing solutions to solve consumer problems since the early 1990's. Additionally, he has written and edited numerous articles and books, taught continuing education classes for industry scientists, and developed successful websites. His latest book is *Beginning Cosmetic Chemistry 3rd Edition* published by Allured.

Connect with Perry on the following social media sites.

#### Follow Perry on Twitter

View Perry's profile on LinkedIn: http://www.linkedin.com/pub/dir/Perry/Romanowski

And if you are curious for more, see this post on how Perry became a cosmetic chemist.









## SUPPLIERS' DAY 2019 .CELEBRATING 40 YEARS

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### 40th Anniversary of Leading Trade Show & Conference for Innovations in Beauty and Personal Care Ingredients, Raw Materials and Formulations

(New York, NY, November 2018) — North America's main event for beauty ingredients, formulations, and delivery innovations, New York Society of Cosmetic Chemists (NYSCC) Suppliers' Day, recently held a press reception in New York City to announce new educational programming and enhanced industry alliances. The 40th Annual Suppliers' Day will take place May 7-8, 2019, at the Jacob K. Javits Convention Center in New York, NY.

#### New for Suppliers' Day 2019:

- -"Fragrance: The Invisible Art," an all-day, in-depth Fragrance Program, co-produced with the American Society of Perfumers featuring experts in perfume, scent, essential oils, consumer trends, and more.
- -In partnership with CEW again, the "Supplier's Award: Ingredients and Formulation,"
- will be announced in advance at Suppliers' Day and then celebrated at the renowned, annual CEW Beauty Awards ceremony later in the month. Increasingly, the line between marketing and formulation is being challenged and blurred in product development and this award highlights how all the elements and departments—ingredients, formulation and final delivery—need to work together for successful product launches.
- -Spotlight on the important topic of "Safety & Testing." Suppliers' Day will be collaborating with IKW, a leading European Association for German Cosmetic, Toiletry, Perfumery and Detergent, to create a program that addresses important safety and lab testing topics in the industry today.
- "We are excited about these new programs added to Suppliers' Day. These initiatives reflect the very core of NYSCC—fostering education and advancing cosmetic chemistry," said Cathy Piterski, Chair, NYSCC.

Additional announcements made at the press reception included:

- -Suppliers' Day 2019 has added an additional exhibit hall making it the largest event in the show's history. This hall will also feature presentation theaters and an innovation hub that will experientially complement specific theater presentations.
- -Renewed partnerships with more to come, including industry associations CEW, ICMAD, IFSCC, and Peclers Paris, a leader in global trends analysis.
- -Enhanced student engagement with an expanded Future Chemists Workshop that will include college students from Florida, Illinois and other states across the country, as well as a segment for bench chemists who are new to the industry.
- "The 2019 show is being designed to offer the most experiential event in cosmetics chemistry in North America. We are specifically showcasing programs and specialty areas that will immerse attendees in formulation while highlighting the milestones over four decades that have brought us to 2019!" said Sonia Dawson, Chair-elect, NYSCC.

For more information on NYSCC and Suppliers' Day visit: <a href="http://nyscc.org/suppliers-day">http://nyscc.org/suppliers-day</a> or email: <a href="mailto:suppliersday@nyscc.org">suppliers-day</a> or email: <a href="mailto:suppliersday@nyscc.org">suppliersday@nyscc.org</a>.



## Disney's Yacht and Beach Club Resorts September 12th – 14th 2019

#### ATTENDEE REGISTRATION NOW OPEN!!!

Visit <a href="https://flscc.org/attendee-registration-form/">https://flscc.org/attendee-registration-form/</a> for registration information and forms.

#### SYMPOSIUM SPONSORSHIPS

The Florida Chapter of the Society of Cosmetic Chemists would like to offer you an opportunity to sponsor our upcoming 2019 Sunscreen Symposium. Historically this event draws hundreds of Cosmetic Industry professionals and offers a great opportunity to showcase your company as a Sponsor of the event. As sponsors we extend to you the first opportunity to contribute to the giveaways that will be added to our complementary symposium bag given to each symposium attendee. The Symposium will not be possible without the generous support of our sponsors and we hope that you would consider being an intricate part of this event. If you are interested in becoming a sponsor please review the various sponsorship opportunities below. We hope that your company would partner with us to help make the 2019 Sunscreen Symposium a success! We thank you in advance for your support."

For more information about sponsorship and the symposium, visit: <a href="https://flscc.org/sunscreen-symposium/">https://flscc.org/sunscreen-symposium/</a>

#### Support the SCC every time you shop on Amazon!

You can now support the Society of Cosmetic Chemists every time you shop on Amazon! It's a simple and easy way to contribute, at no additional cost to you, to the SCC education fund to help us provide new education opportunities!

When you shop Amazon using the link <a href="https://smile.amazon.com/ch/13-1976655">https://smile.amazon.com/ch/13-1976655</a>, you'll find the exact same low prices and convenient shopping experience you're used to with Amazon, with the added bonus that Amazon donates a percentage of the price of eligible items to the Society of Cosmetic Chemists, at no extra cost to you!

