

# Cellulose and Renewable Materials Division Newsletter



A Division of the American Chemical Society

## Division Officials

Chair: Stephen Eichhorn

Chair-Elect: Gordon Selling

Immediate Past Chair:  
Sheila Murphy

Secretary: Michael Santiago

Treasurer: World L-S Nieh

Councilors:

Kevin J. Edgar

Lucian Lucia

Scott Renneckar

Alternate Councilors:

Nicole Labbe

Tom Elder

Noureddine Abidi

Program Chair: Maren Roman

Vice Program Chair:

Wim Thielemans

Technical Program

Administrator:

Peney Patton

Awards Chair: Monica Ek

Events Chair:

Nikki Robitaille Brown

Membership Chair:

Johan Foster

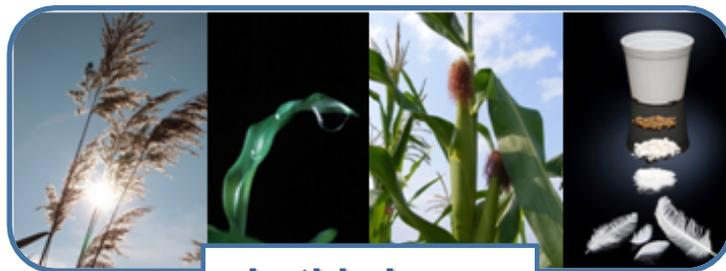
Publicity Chair: Koon-Yang Lee

Members-at-Large:

Maria Auad

Falk Liebner

Maria Soledad Peresin



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## Letter from the Division Chair

### Chair (2017 – 2018): Stephen Eichhorn

It is with great pleasure and honor that I take up this role as Chair of the division, with effect from January 2017. I would first like to take the opportunity to thank Sheila Murphy for her leadership and great efforts as Chair over the past two years. Sheila has led our division to one of great strength. Over the last year of shadowing Sheila, I have learnt a great deal and I am indebted to her for her guidance and advice on a whole range of issues. In recognition of Sheila's service to the division we are making her this year's division Fellow. Well done Sheila!



CELL Division Chair: Stephen Eichhorn

The progress made with our division has also been down to the support of the other officers who also give their time voluntarily. We have a number who have stepped down, or who will step down at the Spring Meeting in San Francisco. I would particularly like to thank Carter Fox who has been our Publicity Chair. Amongst Carter's achievements have been the development of our website and our presence on Facebook! Koon-Yang Lee, from Imperial College, now takes on this role from him. I would also like to thank Nikki Brown, our Member at Large, but also our Events Chair. Without Nikki we would not have such wonderful banquets these last few years. Taking over in this role will be Solé Peresin from Auburn University. I know she can organize a party, having been to a few of them myself! I would also like to welcome Maria Auad as Member-at-Large and Nicole Labbe as Alternate Councilor. Gordon Selling also ends his term as Alternate Councilor, but becomes our new Chair Elect. I'm sure Gordon will do a great job. I would like to thank all our officers, those leaving us and those that are continuing in service. We'll get a good chance to thank them at the Banquet.

As we approach the Spring Meeting, I have been saddened to hear about colleagues who have decided that they will not travel to the meeting in San Francisco due to the recent legislation imposed by the current US administration. We live in difficult times. This recent legislation that prevents our scientific friends and colleagues around the world from meeting with us to collaborate and discuss our work is regrettable and retrograde. I do hope that we can overcome these barriers. We are after all an international division, with people engaged in cellulose and renewable materials research from all over the globe. As a division Chair, I will be seeking to find ways to engage our members more widely, seeking inclusivity and not exclusivity.

So, I look forward to seeing those of you that can make it to San Francisco, and for those who will not be there do get in touch and let me know your thoughts on how the division can better serve you and others.

## Letter from the Immediate Past Chair

### Immediate Past Chair (2017 – 2018): Sheila Murphy

As Immediate Past Chair of the CELL division, I want to thank all the Executive Committee Members and CELL members for the great honor of serving the division these last two years. Since the last newsletter, we have made significant headway resulting in a vote on our proposed bylaws. The bylaws now reside with the ACS Committee on Constitution and Bylaws for final approval. We held a membership survey and Strategic Planning Retreat ahead of the 2016 Spring National Meeting, more about that later. Our Program Chair, Maren Roman, has produced great program for us in San Francisco and a small program for the Fall meeting in Washington, DC. I encourage you to let Maren and Wim Thielemans, Vice Program Chair, have your ideas and suggestions for future programs. Better still, why not volunteer to organize a symposium?



CELL Division Immediate Past Chair:  
Sheila Murphy

**Highlights of 2016:** Every year, the division has to submit to the ACS an end of year report of our activities. At this time, we can review the divisional activities against a number of criteria set forth by groups within the ACS to recognize the efforts of the technical divisions and submit our efforts for a ChemLuminary Award. In 2015, we highlighted our work for “Global Engagement Award” and “Recognition of Innovation and Outstanding Service to Members of a Division”. Both submissions made it to the final review and we were rewarded with the 2016 “Recognition of Innovation & Outstanding Service to Members of a Division”. Congratulations to everyone that helped CELL achieve this award. This year CELL has submitted two more events for the 2017 ChemLuminary Award: “Outstanding Collaboration Between a Local Section and Division” for its work with CARB and the LA Local Section organizing the International Carbohydrate Symposium, New Orleans, July 17 – 21 2016 and “Recognition of Innovation and Outstanding Service to Members of a Division” for the Strategic Planning Retreat convened to address opportunities and challenges facing our members.

**2016 Membership Survey:** Just prior to the spring national meeting we worked with the ACS to construct a membership survey to help us judge our successes and challenges. We received 152 responses to our membership survey; while this represents only 6% of our membership, it helped us to see what you think of our efforts. Most of the responses came from our employed scientists and most of those were academics. However, we received responses from industry, governmental staff, postdocs, graduate students and undergraduates. We were surprised to see that forty percent of the respondents had been members for less than five years, which led us to review the demographics of our division – more on that later. Over two thirds of the respondents were not very involved in the division. A

majority indicated that the benefit of membership was related to the opportunities for technical information exchange at meetings and through networks, a benefit we have noted from past membership surveys. 40% of the respondents thought we could do better representing our field within industry, to the public and with training and professional development so this was a topic that was discussed at our retreat. We were delighted to see that 40% of the respondents said they were willing to volunteer their time, especially with meeting planning. For those that want to help with technical meetings please get in touch with our Program Chair and let her know how you can help. If you have a desire to get involved in any other way please contact our Chair or any member of the Executive Committee. Despite the growth in social media the vast majority of respondents wished to be contacted about important material by e-mail. We noted the request for more opportunities to collaborate with scientists from other divisions, both domestic and international, and improve our student-specific offerings and engagement. In response to some of the comments we received we are looking at ways to be more transparent and let our members know what the Executive Committee members do. This survey provided key input upon which we based development of our strategic plan for 2016 and beyond.

**2016 Strategic Planning Retreat:** Ahead of the spring national meeting, 12 members of our division spent two days addressing our division vision and mission in light of the results of the membership survey. At the end of the session, we had constructed an action plan to close the gap between our desired vision and current status. Here, I will give you a little more information about the material we discussed. The team was selected to generate a group that represented our general membership in terms of geographic location, gender, and career stage from student to professional status, across academia, government and industry. Upon a review of the membership survey, the team looked more closely at our demographic data. Graduate and undergraduate students make up a large portion of our membership and this caused the team to consider how we best serve this segment of our division whether it is through national meeting events or useful information to our members as they transition from students to professionals.

Another topic generating much discussion was the effectiveness of division service to all members. This led to discussions on how well the division welcomed diversity, something we prefer to describe as inclusivity for all members. We can see that the Executive Committee is relatively well balanced, within the confines of the current bylaws, relative to the composition of the membership as a whole. However, in reviewing our recognition program we recognized that we have room for improvement. Specifically, we wish to see our list of divisional awardees grow to represent more closely our diverse membership. We wish to reach out to you, our membership, to address this opportunity. Do you know someone who should be recognized through one of our awards? The Anselme Payen Award (for 2017 submissions)? The KINGFA Young Investigator Award (for 2017 submissions)? The Graduate Student Award (for 2018 submissions)? The ACS Fellow Award (consider now for 2018 submissions)? The Division Fellow Award (for 2017)? What is preventing you from submitting your thoughts? If the idea of

filling out all of our forms is off-putting, you will be pleased to know that we are considering ways to lessen the burden. Meanwhile, if there is someone you would like to nominate for one of our awards and you need help with the forms please contact one of the Executive Committee members.

The team also considered ways to improve interactions with industry by considering ways to represent resources the division could offer in ways that industry would find useful. We recognize that a vast majority of our membership does not get to a national meeting, and the team brainstormed innovative ways we could use today's various communication tools to better serve those who cannot attend a national meeting. The approved Strategic Plan can be found on our website (<http://cell.sites.acs.org/strategicplan.htm>).

I conclude this letter congratulating our newly elected Officers and wishing them, and all CELL members, a safe and successful year. I look forward to seeing you in San Francisco.

## **Division News**

### **Elections**

The Cellulose and Renewable Materials Division held elections late last year to fill positions on our Executive Committee where terms were up for renewal. Gordon Selling will take up the role of Chair-Elect. Michael Santiago remains as the Secretary and Kevin Edgar will continue his role as Councilor. Nicole Labbe has been elected to become the new Alternate Councilor and Maria Auad will take up the Member-at-Large on the Executive Committee.

### **Awards**

Sheila Murphy has won the 2017 the American Chemical Society (ACS) Cellulose and Renewable Materials Division (CELL Division) Fellow award for her hard work and service to the Division. This award will be presented to her at the Banquet in the 2017 ACS Spring meeting in San Francisco.



The ACS CELL Division is also pleased to announce that Dr Emily Cranston (Assoc. Prof. at McMaster University) has been selected as the winner of the inaugural KINGFA Young Investigator Award. This award recognizes Dr Cranston's ground breaking research and advancements in the study of cellulose nanocrystals. Dr. Cranston will receive \$1,500 and a plaque to be given at the 2017 CELL Division Awards Banquet in San Francisco.

This year's Anselme Payen Award winner is Dr Kevin Edgar, Professor in the Department of Sustainable Biomaterials at Virginia Tech. Dr Edgar has made many contributions to the design, synthesis, and structure-property evaluation of novel polysaccharide derivatives for demanding applications, with a particular focus on development of pharmaceutical drug delivery systems. He has served in several CELL Division leadership positions, including Division Chair. He was named an ACS Fellow in its inaugural class in 2009, and a CELL Division Fellow in 2010. Dr Edgar will be presented with the award at the ACS Division Cellulose and Renewable Materials Awards Banquet following a symposium in his honor during the 2017 ACS Spring National Meeting in San Francisco, CA.



## **2017 ACS Spring Meeting – CELL Program and Events**

This year's program of the Cellulose and Renewable Materials Division at the 253rd ACS National Meeting in San Francisco, CA, to be held April 2-6 2017, comprises of 15 symposiums with more than 400 oral and 70 poster presentations. The CELL Division Meeting-at-a-Glance can be found at the end of this newsletter. For the full program and presentation abstracts for symposia being organized and sponsored by the Division of Cellulose and Renewable Materials at the ACS National Meeting in San Francisco, CA, please visit the division's website at <http://cell.sites.acs.org/conferences.htm>.

### **CELL Division Awards Banquet – Tuesday, April 4<sup>th</sup>, 6:30 pm**

The Division of Cellulose and Renewable Materials Awards Banquet will be held at The Chart House (<http://www.chart-house.com/locations/san-francisco/menus.asp>), located at Pier 39, Space 206-8 Building K, San Francisco, CA 94133, United States. The special guest of honor will be this year's Anselme Payen Award winner Dr Kevin Edgar. A reception will begin at 6:00PM, and dinner will follow. A banquet ticket is required to attend this event.

Tickets can be purchased when you register for the ACS conference online, or by contacting the division Events Chair, Nikki Robitaille Brown.

### **CELL Division Governance Meeting – Wednesday, April 5<sup>th</sup>, 5:30 pm** **Moscone Center, Room 274**

The Division's Executive Committee would like to extend an invitation and encourage everyone to attend our Governance meeting. This is your chance to learn about ongoing activities within the division, share your viewpoints, and influence the future of the division.

## Meeting-at-a-Glance of the 253rd ACS Spring National Meeting, San Francisco, CA, April 2-6, 2017

Division of Cellulose & Renewable Materials					
<i>M. Roman, Program Chair</i>					
Moscone Center	S	M	Tu	W	Th
Cellulose Structure & Biosynthesis, <i>Organizers: N. Carpita, H. O'Neill, P. Langan, D. Cosgrove, J. Zimmer</i> (Cosponsors: AGFD, CARB, POLY, PMSE) <a href="#">Rm 270</a>	D	D	A		
Processing & Properties of Biobased Composites & Blends, <i>Organizers: J. Barone, P. Navard</i> (Cosponsor: EPNOE) <a href="#">Rm 262</a>	D	D	D	A	
Design & Control in Polysaccharide Chemistry: Anselme Payen Award Symposium in Honor of Kevin J. Edgar, <i>Organizers: C. Buchanan, P. Fardim, O. Rojas</i> (Cosponsors: CARB; Financial Cosponsors: EPNOE, Eastman Chemical Company, VT Fralin Life Sciences Institute, VT College of Natural Resources & Environment, VT Dept. of Sustainable Biomaterials, Carbohydrate Polymers-Elsevier) <a href="#">Rm 252/260</a>	D	D	D		
Nanocellulose Processing & Analysis, <i>Organizers: M. Borner, W. Hamad, T. Lindstrom, M. Roman</i> (Cosponsors: AGFD, ANYL, CHAS, INEC; Financial Cosponsors: TAPPI, Celluforce, Inc. FP Innovations) <a href="#">Rm 272</a>	D	D			
Valorization of Renewable Resources & Residuals into New Materials & Multiphase Systems, <i>Organizers: M. Auad, O. Rojas, J. Campos-Teran</i> (Cosponsor: AGFD) <a href="#">Rm 276</a>	D	P	D	D	D
New Horizons in Sustainable Materials, <i>Organizers: S. Renneckar, N. Sathitsuksanah, N. R. Brown, M-P. Laborie</i> (Cosponsor: POLY) <a href="#">Rm 274</a>	D				
General Posters <a href="#">Hall D</a>	E				
Chemistry & Physical Chemistry of Thermal Processes for the Circular Carbon Economy, <i>Organizers: C. Pope, H. Mayes</i> (Cosponsors: ENFL, ENVR) <b>AMTSP</b> <a href="#">Rm 276</a>		A			
Functional Lignocellulosics & Nanotechnology, <i>Organizers: M. Peresin, T. Nypelo, E. Filpponen, S. Spirk, M. Ek</i> (Cosponsors: CARB, COLL; Financial Cosponsors: Bio Navis, EPNOE) <b>AMTSP</b> <a href="#">Rm 274</a>		D	D	D	D
Sci-Mix <a href="#">Rm 252/260</a>		E			

Developments in the Fields of Celluloses & Lignocelluloses: In Honor of Dr. Rajai Atalla, <i>Organizers: U. Agarwal, T. Larsson, A. Isogai, T. Elder</i> (Cosponsors: AGFD, ANYL, POLY; Financial Cosponsors: HORIBA, University of Tokyo, Innventia AB, US Forest Service) <a href="#">Rm 272</a>			D	D	D
Advances in Polysaccharides: Practice & Applications, <i>Organizers: H.N. Cheng, A. Biswas</i> (Cosponsors: AGFD, CARB, POLY, PMSE) <a href="#">Rm 270</a>			P	D	D
Bio-based Gels & Porous Materials, <i>Organizers: F.W. Liebner, T. Budtova</i> (Cosponsors: AGFD, CARB, COLL, POLY, PMSE; Financial Cosponsors: EPNOE) <b>AMTSP</b> <a href="#">Rm 252/260</a>				D	D
Frontiers in Glycoanalytics, <i>Organizers: M. Roman, G-J. Boons</i> (Cosponsors: ANYL, MPPG, CARB; Financial Cosponsors: Agilent, Bruker BioSpin Corp., Postnova Analytics, Inc., Rigaku Corp., Waters Corp., Wyatt Technology Corp.) <b>AMTSP</b> <a href="#">Rm 130</a>				P	A
Reactive Extrusion: Advances at the Nexus of Polymer Processing, Materials, Technology & Green Chemistry, <i>Organizers: L.A. Lucia, A. Ayoub</i> (Cosponsors: MPPG, POLY) <b>AMTSP</b> <a href="#">Rm 262</a>				P	D
<b>Cosponsored by CELL</b>					
Holy Grails in Chemistry: Celebrating the 50 <sup>th</sup> Anniversary of <i>Accounts of Chemical Research Journal*</i> (PRES) <a href="#">Golden Gate A, San Francisco Marriott</a>	PE				
Science for a Sustainable Energy Future: Energy Storage* (PRES) <a href="#">Rm 130, Moscone Center</a>		D			
Carbohydrate-Based Hybrid Materials for Nanomedicine* (CARB) <a href="#">Grand Ballroom West, Grand Hyatt San Francisco</a>		P	A		
Biomass & Biofuel Processing* (ENFL) <a href="#">Conference Theater, Grand Hyatt San Francisco</a>			D	D	
LPS: Chemistry, Synthesis & Applications* (CARB) <a href="#">Grand Ballroom East, Grand Hyatt San Francisco</a>			D		
Carbohydrate-Based Nanomaterials & Drug-Delivery Vehicles* (CARB) <a href="#">Grand Ballroom East, Grand Hyatt San Francisco</a>				D	
<b>AMTSP</b> : Advanced Materials, Technologies, Systems & Processes A=AM; P=PM; D=AM/PM; E=EVE					

## Upcoming Conferences

### **International Conference on Bio-based Materials and Composites**

March 29<sup>th</sup> – 31<sup>st</sup>, 2017

Nantes, France

<https://symposium.inra.fr/icbmc2017>

### **New horizons for nanocellulose technology**

May 2<sup>nd</sup> – 3<sup>rd</sup>, 2017

London, United Kingdom

<https://royalsociety.org/science-events-and-lectures/2017/05/nanocellulose-technology/>

### **19<sup>th</sup> European Carbohydrate Symposium**

July 2<sup>nd</sup> – 6<sup>th</sup>, 2017

Barcelona, Spain

<http://www.eurocarb2017.com>

### **5<sup>th</sup> EPNOE International Polysaccharide Conference 2017**

August 20<sup>th</sup> – 24<sup>th</sup>, 2017

Jena, Germany

<http://www.epnoe2017.de/registration-abstracts/registration/>

### **254<sup>th</sup> American Chemical Society National Meeting**

August 20<sup>th</sup> – 24<sup>th</sup>, 2017

Washington, DC, USA

<https://callforpapers.acs.org/DC2017>

The CELL Division has an open Call for Papers for this ACS Fall meeting. Please follow the link above to submit an abstract. The deadline for abstract submission is April 10<sup>th</sup>, 2017.

## Recent Job Postings

### **Assistant/Associate Professor – Biopolymer Materials at Virginia Tech**

The Department of Sustainable Biomaterials at Virginia Tech is seeking applications for the position of assistant/associate professor in the area of biopolymer materials. Virginia Tech has strong academic programs in biomaterials science, polymers, materials science, biology, and materials science and engineering.

*Position Description:* The tenure-track position will be at the Assistant/Associate Professor level and will be an academic year (9 month) appointment. The position will be split approximately 50% fundamental or applied research and 50% teaching. The successful

candidate is expected to develop an internationally recognized research program in biomaterials from renewable resources, with major focus on biopolymers. Annual teaching responsibilities will include a minimum of one undergraduate course and one graduate course in the related areas of expertise. The successful candidate will be encouraged to develop new courses in their area of expertise. There will be teaching and research opportunities in collaboration with the Macromolecules Innovation Institute at Virginia Tech. The position provides excellent opportunities to develop a strong interdisciplinary program with other researchers in the department and on the Virginia Tech campus in fields including polysaccharide chemistry, wood composites and adhesives, polymer science, materials science, biology, and macromolecular science and engineering. Cooperation and collaboration within the department, across our campus, and with colleagues at other institutions is expected, thus strong collaborative skills are required. The successful candidate will be expected to obtain extramural funding, publish in refereed journals, participate in meetings of professional societies, serve as chairperson for graduate students, and serve on graduate committees.

*Qualifications:* Candidates must have a Ph.D. in chemistry, polymer science, wood science, chemical engineering, biomaterials, materials science engineering, macromolecular science and engineering, or closely allied fields, with demonstrated experience in biomaterial science. The successful candidate must be able to communicate effectively with people at all levels in university, industry, and government sectors.

More details can be found here (<https://listings.jobs.vt.edu/postings/73978>).

### **Post-doctoral Position (2 years) in the Walther Lab at University of Freiburg**

The topic of this postdoctoral position is the preparation of water-borne biomimetic nanocomposites by combining synthetic polymers with functional groups (e.g. hydrogen bonding, dynamic covalent, photo-responsive) with cellulose nanofibrils to form bioinspired nanocomposites. This encompasses polymer synthesis and characterization, self-assembly into bioinspired nanocomposites, analysis of structural, mechanical and thermal properties (also with in-situ methods). Our aim is to fill the white areas of structure/property chart using molecularly controlled bioinspired materials concepts.

Applications should include a letter of motivation, CV, list of publications/summary of PhD work, full transcript of the MSc degree and two contact persons for a personal reference.

More information can be found here (<https://www.walther-group.com/job-opening-for-postdocs>).