

THE CAPITAL CHEMIST

A Publication of the Chemical Society of Washington Section of the American Chemical Society

CSW / WCDG Joint Meeting - November 18, 2020, 5:30 p.m.

The Chemical Society of Washington (CSW) (<https://capitalchemist.org>) and the Washington Chromatography Discussion Group (WCDG) (<https://washchrom.org/>) are pleased to present this virtual meeting via Zoom:

A Survey of Cannabinoids in Hemp-Derived Products from the United States Marketplace

November 18, 2020
5:30 PM (ET)

Biography

Dr. Geoffrey A. Dubrow is a staff fellow in the Office of Regulatory Science within the FDA's Center for Food Safety and Applied Nutrition (CFSAN). At CFSAN, his work focuses on the analysis of cannabinoids in hemp-containing products. Prior to his work at FDA, Geoff completed his PhD in food science and technology at the Ohio State University in 2019, focusing on the use of untargeted LC/MS and GC/MS "flavoromics" to understand chemical drivers of consumer acceptability in strawberry jams. Beyond food safety, his research interests include the application of chemometrics and metabolomics towards the understanding of food and flavor chemistry, and high-throughput sample preparation.

Abstract

The 2018 Agricultural Improvement Act removed hemp from Schedule I control, creating a market for hemp products, including cannabidiol-containing products. Due to the market's rapid growth, little is known about the presence and concentration of cannabinoids in commercial products. In the present study, 11 cannabinoids were quantified using liquid chromatography with diode-array detection in a non-representative sampling of 147 products labeled as containing hemp or cannabidiol. Cannabinoid content ranged from 0–143 mg/serving, with a median of 16.7 mg/serving. Fewer than half of products surveyed contained cannabidiol concentrations within 20% of their label declarations. Most products presented concentrations of Δ^9 -tetrahydrocannabinol below LOQ. These findings emphasize the need for further testing and representative investigation of the cannabidiol marketplace.

Register in advance for this meeting:

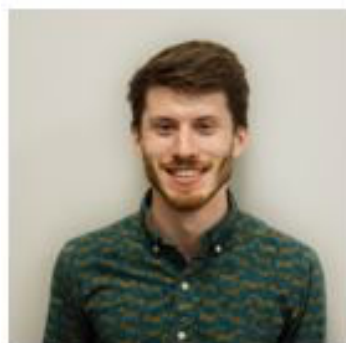
https://american-chemical-society.zoom.com/meeting/register/tZlkd-ysrDluGdKR_TDvwWkbMA00iOrUjZL6

After registering, you will receive a confirmation email containing information about joining the meeting.

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Inside this issue:

- Join us virtually for the joint CSW/WCDG meeting
- **REMINDER: Vote in this year's CSW election**
- Download the slides from the October CSW meeting
- Nominate a colleague for a CSW award



REMINDER - CSW Election Voting Closes November 15th

If you are a full CSW member and have a valid email address on file with The American Chemical Society, then on or about October 11th you received an email with instructions for accessing the secure voting website and candidate statements, along with a unique voter ID code. The ballot was sent to the same email address at which you receive official communications from ACS. If your email account has strong spam filters, please "white list" elections@vote-now.com and election.ballot@vote-now.com in order to ensure that you receive your voter ID code. If you have no email address on file with ACS, or if the emailed ballot was returned as undeliverable, a paper ballot with voting instructions and candidate statements was mailed to the address on file with ACS. Candidate statements are posted on the CSW website (<https://capitalchemist.org/candidates-full-list-2021/>). As in previous elections, voting will close at 11:59 p.m. on November 15th. Just click, read, and vote!

If you haven't voted in prior CSW elections, please take this opportunity to do so, and help shape the future direction of CSW. If you have questions about the voting process, or if you did not receive a ballot by October 21st, please contact us at csw@acs.org.

Highlights from CSW October Meeting

Professor Wilker gave a wonderful seminar on biological cements and adhesives and developing polymer mimics to create advanced adhesives. Slides from his seminar are available below!

Download Slides: https://capitalchemist.org/wp-content/uploads/2020/10/Adhesives_Slides_Wilker_Oct2020.pdf

Abstract:

Peer into a tide pool and you will see the impressive array of materials generated by marine biology. Mussels, barnacles, oysters, soft coral, and kelp all produce adhesives to stay in place. By sticking together in communities these organisms avoid capture by predators, decrease hydrodynamic forces to which they are subjected, and increase population densities for efficient reproduction. Despite the conspicuous presence on beaches, surprisingly little is known about the chemistry and engineering behind such marine biological materials.

Human technology cannot yet rival the properties of materials generated by these seemingly simple animals. Purchase any glue from a hardware store and try to bond two substrates together when underwater. Nothing will stick. Yet sea creatures accomplish such tasks daily. So far, only marine biology can offer the wet setting and strong bonding needed for surgical glues, dental adhesives, and bone cements.

Ongoing efforts in our group address three compelling questions:

- How does marine biology use chemistry to generate materials?
- Can we make synthetic polymer mimics of biological materials with similar properties?
- Will this knowledge allow us to make adhesives for industrial and biomedical applications?

Biography:

1991: B.S. in Chemistry, University of Massachusetts at Amherst
1996: Ph.D. in Chemistry, Massachusetts Institute of Technology
1996-1999: Postdoc, California Institute of Technology

Jon grew up in the Boston area and was often taken to the beach by his parents. Now at Purdue,

his research program focuses on materials produced by marine organisms. A particular emphasis is the adhesives and cements produced by mussels and oysters for sticking to rocks. Ongoing efforts include characterization of these marine biological materials, developing synthetic polymer mimics, and designing applications for these new materials. Projects are often inspired by what is seen while out scuba diving.

Call for Nominations for the 2020 William F. Hillebrand Prize

Nominations are being accepted for the **2020 Hillebrand Prize Award**. The deadline to submit a nomination is November 15, 2020.

Nominations are invited for the 2020 Hillebrand Prize, awarded annually for original contributions to the science of chemistry by a member or members of the Chemical Society of Washington (CSW), the local section of the American Chemical Society. The Hillebrand Prize is the most prestigious honor given each year by CSW and is recognized nationally as a mark of significant accomplishment in chemistry. The Hillebrand Prize originated in 1924 and is named for Dr. William F. Hillebrand (1853- 1925), an internationally-recognized pioneer in analytical chemistry and one of Washington's most distinguished early chemists.

The prize carries an honorarium of \$2000. Many previous Hillebrand Prize recipients have won numerous other national and international awards, including three who have received the Nobel Prize. See the list of award winners: <https://capitalchemist.org/2018/06/hillebrand-prize-recipients-by-year/>.

The nominating package should contain the following:

Nominating Letter – limited to 1000 words

The letter should focus on the chemical accomplishments of the nominee, rather than the bio of the nominee, from a broad standpoint, leaving the finer points to those submitting seconding letters. Biographic details (degrees, positions held, major activities etc.) will be given in the nominee's CV. The letter should begin with the major theme(s) in the nominee's research career with perhaps a summary of how these evolved over the years to create breakthroughs or push the field in a new or very productive direction.

Describing the nominee's major contribution(s) is extremely important and should be the bulk of the letter.

There is no preference or restriction for the specific area of contribution so long as it represents a significant accomplishment in chemistry. Anything is fair game; synthetic or analytical, experimental or theoretical, bio- or inorganic, etc. This section might detail such things as: the major techniques used in their research and how these were applied to a specific area to bring about significant results not previously achievable; if their research resulted in the development of a new experimental/instrumental technique or use of an existing technique in an innovative new way; how techniques the nominee developed became standard in that area; the impact the nominee's work had on influencing other areas of research; development of new reagents, catalysts or reaction conditions; development of a new computational method or theoretical approach; etc. The nominator should provide evidence in support of these statements. This could include information about: the number of citations, impact factors of certain articles (or aggregate numbers), especially influential articles/book chapters, important invited talks, previous awards by other societies, patents, funding, important leadership positions, etc. Mentioning an extremely productive collaboration is possible so long as the role/contributions of the nominee are clear. The award is not given for mentoring students (as a specific criteria) but nominators often mention if this has occurred, especially if these students have gone on to significant posts on their own.

Two Seconding Letters – limited to 500 words each

It is helpful if these be from established experts in the nominee's field, and best if they are from experts at

institutions other than the nominee's unless a notable expert in the nominee's area is also from the nominee's institution.

Curriculum Vitae – the candidate must be a member of CSW

The CV should strongly emphasize individual academic backgrounds, appointments, publications, presentations, and patents.

List of Publications

This is critical in determining the specific scientific contribution of the nominee or team.

Proposed Citation – limited to 25 words

This is a brief statement that should be understood by chemists in almost any area. It should avoid highly specialized language but still give the reader the area of accomplishment and why this is a significant accomplishment in chemistry. In some ways it is a one or two sentence abstract of the first paragraph of the nominating letter. Since this is only 25 words, you may simply want to provide 1 or 2 examples of previous awardees.

We strongly recommend that the nominator collect all materials and forward in one email, preferably as PDF files(s), to csw@acs.org. Nominations will be active for three years.

If you would like to verify the eligibility of an individual as a nominee or nominator, please contact the CSW Administrator at csw@acs.org. All materials must be received by November 15, 2020. The awardee will be announced before the end of the year, and the Prize will be presented at the CSW dinner meeting in March 2021.

If you have any questions about the award or the procedure for nominating someone for the award, please contact our office – csw@acs.org or 202.659.2650 (voicemail only).

Call for Nominations for the 2020 Charles L. Gordon Award

Named after Charles Gordon for his years of service as managing editor of the *Capital Chemist*, the Charles L. Gordon Memorial Award is given in recognition of exemplary service by a CSW member to the profession of chemistry, to the science of chemistry, and/or to the Chemical Society of Washington. Nominations are invited for this award, consisting of a plaque that will be presented at the March 2021 CSW dinner meeting. A written nomination should include a description of the accomplishments on which the nomination is based. Additional documentation that includes seconding letters and the nominee's CV are welcome.

Completed nominations for the Charles L. Gordon Award are due on or before November 15, 2020. The nomination should be submitted electronically to csw@acs.org. Please contact the Chair of the Awards Committee, Bradley Scates (bascates@gmail.com), if you have any questions.

Call for Nominations for the 2020 Leo Schubert Memorial Award

The Chemical Society of Washington (CSW) is pleased to announce the call for nominations for the Leo Schubert Memorial Award to recognize an outstanding teacher of high school chemistry in the Washington, D.C. area. The award was established in 1979 to honor Dr. Leo Schubert, a chemistry professor at American University who devoted much of his career to developing programs for high school teachers and students. The Schubert award consists of a \$500 honorarium and a certificate, which will be presented at the March 2021 CSW dinner meeting.

Nominations for the award must be comprehensive in describing the nominee's accomplishments in areas such as innovation in teaching, writing curricula, outside teaching, papers published, involvement in science fairs, and postgraduate study. The application may also include supporting letters, as well as any supporting documents that concisely illuminate the nominee's accomplishments.

To be eligible for the CSW Schubert award, the nominee must currently teach chemistry at a secondary school in the geographic region of the Chemical Society of Washington, which includes metropolitan Washington, D.C. and the neighboring counties in Maryland (Montgomery, Prince George's, Charles, Calvert and St. Mary's Counties) and Virginia (Arlington, Fairfax and Loudoun Counties). The region of CSW also includes six counties on the Eastern Shore of Maryland: Caroline, Talbot, Dorchester, Wicomico, Worcester, and Somerset.

Nomination form: https://capitalchemist.org/wp-content/uploads/2020/04/Schubert_nomination_form.pdf

Alternatively, a pdf version of the nomination form can be obtained by an email request to csw@acs.org. Completed nomination forms can be sent directly to csw@acs.org. All nominations must be submitted by November 15, 2020. Please contact the Chair of the Awards Committee, Bradley Scates (bascates@gmail.com), if you have any questions.

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CSW Calendar of Events

November 15: CSW Award Nominations Due

November 15: CSW Election Voting Deadline

November 18: Joint CSW/WCDG (Virtual)

November 19: CSW Board of Managers Meeting

December 9: CSW Meeting (Virtual)/Hillebrand Award Presentation