

# ASP NEWS



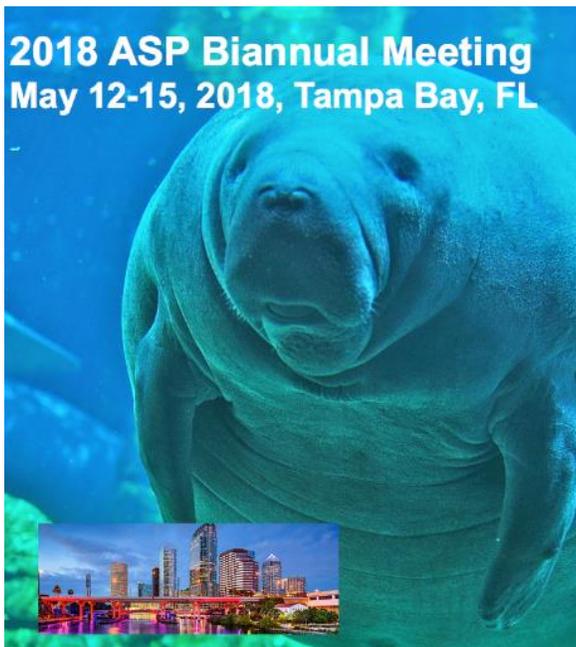
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**2018 ASP Biannual Meeting  
May 12-15, 2018, Tampa Bay, FL**



## President's Note

Dear ASP members and friends,

It is my pleasure to extend my fall 2017 greetings to all of you.

After our successful 2017 ASP Presidential Evening Symposia: 'Photo-excited States: From Tissue Damage to Photomedicine', held in San Diego, CA, April 6-7, and the popular 2nd ASP Associate Online Symposium Summer 2017, I was privileged to attend and present at the 17th Congress of the European Society for Photobiology (ESP), Pisa (Italy), September 4-8, 2017. This event also featured a highly visible ASP-ESP joint symposium on 'Photobiology and photochemistry in aquatic environments'.

Now it is time to draw your attention to the ongoing preparations for our Society's Biennial Meeting, Tampa, Florida, May 2018. The ASP meeting is scheduled for 12-15 May 2018, Tampa Marriott Waterside Hotel & Marina, a breathtaking venue with all state of the art accommodations ensuring an enjoyable and productive meeting. This upcoming ASP 2018 meeting has already secured an impressive lineup of keynote speakers etc., and a preliminary core program with meeting information will go online in late November 2017.

This meeting will feature, among other highlights:

Keynote lectures by:

- Wolfgang Gaertner (Leipzig); May 13
- Tayyaba Hasan (Boston); May 14
- Rutao Cui (Boston); May 15

Celebratory symposium, '55 Years Photochemistry and Photobiology' (Jean Cadet & Irene Kochevar, co-chairs).

ASP-ESP joint symposium.

Special session: *Organic and inorganic photochemistry of functional materials: A Panamerican perspective* (Alec Greer, Lisa Kelly; co-chairs)

Special session: *UVA and Beyond: Frontiers in Photodamage and Photoprotection* (Eduardo Ruvolo, co-chair)

Special session: *ASP Associate member scientific symposium* (chaired by the winners of the 2017 online symposium)

We are also moving forward planning other popular, well-received events such as the ASP Associate Member pizza party, career development workshops, industry exhibits and presentations etc.

Also, the ASP awards committee (that will be in charge of the ASP awards portfolio including travel awards etc.) is currently being assembled and expanded, an effort lead by Imran Rizvi (Boston, USA).

We are expecting an absolutely vibrant conference covering all aspects of contemporary photobiology with 350+ attendees from all corners of the globe.

I very much hope that you share my excitement about these upcoming events. Feedback and suggestions, etc. are always welcome.

Best regards,  
GEORG

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## **2nd ASP Associate Online Symposium Summer 2017**

Winning posters, presentations, and videos can be found online on the ASP website: <http://photobiology.org/virtual2017>

Congratulations to the awardees!

### **Poster Awardees**

**1<sup>st</sup> Place:** Regina DiScipio, Case Western, for "*Ultrafast Competitive Relaxation Pathways of the Pterin Chromophore*"

**2<sup>nd</sup> Place:** Marie Dorr, Universite Laval for "*Identification of Dermal Components Influencing UV-Induced DNA Damage Repair in Epidermal Cells*"

**3<sup>rd</sup> Place:** Michael Pigula, Harvard Medical School for "*Enhanced Cancer Cell Delivery of*"

*Photoimmunoconjugates through Nanocarrier Engineering"*

### **Presentation Awardee**

**1st Place:** Regina DiScipio, Case Western

### **Video Awardee**

**1st Place:** Michael Pigula, Harvard Medical School (Youtube)

Thank you for all the submissions and see you in Tampa 2018,

The 2017 online symposium organizing committee: Sherri McFarland, Imran Rizvi, Jon Lovell, Joe Huang, Ashwini Ghogare, Richard Davis, Damilola Fajuyigbe & Joanna Turner (chair).



### **Historian's corner: Reflection on the Electronic Age**

The electronic age is changing the landscape for scientific journals, grant applications and ordering paprika. Let me explain. In the early days, grant applications were printed on paper, images carefully pasted in and a packet of 18 copies mailed off to the NIH or NSF. There are ancient images showing a forklift moving vast piles of grant proposals around. These were

handed out to study sections seated at tables arranged in a vast square. In the center, a collection of empty paper cartons. After each proposal was reviewed, the membership would hurl the copies into the cartons and a cheer would go up. Now, it's all done electronically, with the rules ever more severe: page limitations, font limitations, line spacing limitations, appendix material limitations. If only 7-9% of incoming grant proposals are to be awarded, no point in making life difficult for the reviewers.

In journal submission and publication, a similar revolution has occurred. In the remote past, reports were submitted on paper with drawings or photographs attached. The ability of the author to tweak the data was limited and reviewers took careful note of 'paste-up' irregularities. Proofs arrived by mail, were marked up & sent back and a hard-copy of the journal would eventually arrive, assuming that the comments of reviewers were dealt with. Soon, post-cards would arrive, asking for reprints that the author was obliged to purchase from the publisher.



In the present system, reports are submitted via an exacting internet process, review occurs by email and electronic journals are slowly replacing those printed copies. One can extract a PDF file of a report if the home institution has the proper credentials. These are stored not in a filing cabinet, but in a computer file. The days when one could stop by the University library to catch up on the pertinent journals no longer exist. ASP was once supported in part by substantial funds from

Pergammon Press, the former publisher of P&P. This source of income has now been substantially diminished.

The speed at which things are done has been greatly amplified, the outpouring of data is staggering although (unfortunately) the ease with which results can be 'improved' is becoming a concern. Retrieval services permit the investigator to keep up with the literature from home or office with library space recycled into more useful purposes. As the means for facilitating accrual, reporting and exchange of information is accelerating, support for research is falling off. The last page of the journal *Science* is now devoted to reports by research personnel, often describing vain efforts at finding jobs and funding.

Ordering paprika has also been greatly simplified. No longer it is necessary to settle for whatever the local grocery stocks: Amazon.com will put the finicky user in touch with 100 varieties, to be delivered in the next mail.

-David Kessel



**We need YOU!**

Please submit content (science highlights, suggested links, personal stories, etc) to ASP News.

Email: [jflovell@buffalo.edu](mailto:jflovell@buffalo.edu) or [Huang.Huang-Chiao@mgc.harvard.edu](mailto:Huang.Huang-Chiao@mgc.harvard.edu)

## A Festschrift for Wolfgang

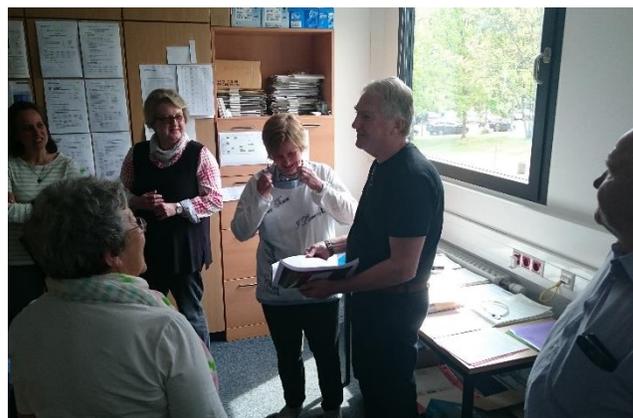
The journal of the ASP, Photochemistry and Photobiology, has published a "Festschrift" (ie collection of writings) in honor of the 65th birthday of Prof. Wolfgang Gärtner.

This comprises 26 articles that constitute the full [May/June issue of 2017](#).

The printed issue was handed over to Wolfgang (photograph) at a meeting in Leipzig as surprise present, as he was not aware of its preparation.

The articles were contributed from friends, colleagues, collaborators and former students. The overarching topic of the special issue is related to Wolfgang's main research focus on photoreceptor proteins that comprises many representatives from retinal proteins to flavin and tetrapyrrole binding proteins.

-Jean Cadet



*Wolfgang Gärtner in company of his wife, Aba Losi, discovers the surprise issue!*

## Call for Papers

There is to be an issue of *Lasers in Surgery and Medicine* dedicated to Tom Dougherty and edited by Steen Madsen and David Kessel. Articles are being soliciting for this issue which are to be

submitted on the LSM website between now and 31 December 2017.

The website to submit articles is:

<https://mc.manuscriptcentral.com/lsm>.

Indicate somewhere that your manuscript is intended for the Dougherty issue. It is not necessary that either lasers or surgery be explicitly involved: the journal may take the broad view that sooner or later, it will.

-David Kessel

## Wallpaper bio-solar panel

A two-in-one solar bio-battery and solar panel has been created by researchers who printed living cyanobacteria and circuitry onto paper.

Cyanobacteria are photosynthetic micro-organisms that have been on Earth for billions of years. They are thought to be the primary reason why the Earth's atmosphere is oxygen rich.

Now, a team has demonstrated that cyanobacteria could be used as an ink and printed from an inkjet printer in precise patterns onto electrically conductive carbon nanotubes, which were also inkjet-printed onto the piece of paper. The team showed that the cyanobacteria survived the printing process and were able to perform photosynthesis so that small amounts of electrical energy could be harvested over a period of 100 hours.

A bio-solar panel made in this way, the approximate size of an iPad, could power a simple digital clock, and in separate experiments, a small LED light bulb.

The researchers from Imperial College London, the University of Cambridge and Central Saint Martins suggest their breakthrough could lead to new types of electrical devices that are made from paper and printed photosynthetic bacteria. These could include disposable power supplies integrated into paper-based sensors for monitoring patients with diabetes or devices that resemble wallpaper but are in fact environmental sensors for monitoring air quality in the home.

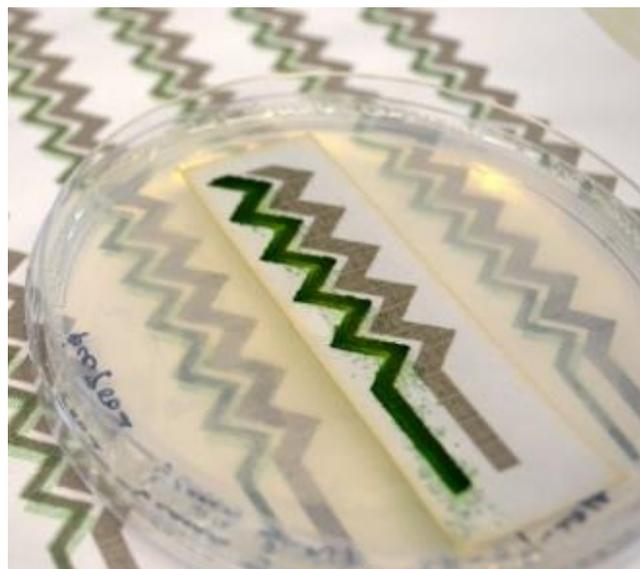
Dr Marin Sawa, a co-author from the Department of Chemical Engineering at Imperial College London,

said: "We think our technology could have a range of applications such as acting as a sensor in the environment. Imagine a paper-based, disposable environmental sensor disguised as wallpaper, which could monitor air quality in the home. When it has done its job it could be removed and left to biodegrade in the garden without any impact on the environment."

The solar bio-battery pushes forward research into a new type of renewable energy technology currently being developed by scientists globally called microbial biophotovoltaics (BPV). It exploits the ability of cyanobacteria and other algae that use photosynthesis to convert light energy into an electrical current using water as the source of electrons.

One of the advantages of using BPVs to harvest energy from cells like cyanobacteria is that they can produce small amounts electricity in daylight and carry on producing it even in the dark from molecules produced in the light.

Some of the current limitations that scientists have previously faced when developing BPVs are that they are expensive to make, have low power output, and a short lifespan. All these drawbacks have prevented scientists from being able to scale up the technology to an industrial level.



*A petri dish with a sample of the bio-solar panel. The bio-solar panel could resemble wallpaper, but is in fact an environmental sensor for monitoring air quality in the home.*

The team says their approach of using an off-the-shelf inkjet printer to construct BPVs demonstrates a potential method for easily scaling up the technology, which may pave the way for its wider use.

The current paper-based BPV unit is a palm size. The next step will see the team scale up their proof-of-concept to A4 size to determine the electrical output on a larger scale.

Professor Christopher Howe, a co-author from the Department of Biochemistry at the University of Cambridge, added: “This is an exciting proof-of-concept. The challenge now is to make panels that are more powerful, long-lasting and robust.”

The journal *Nature Communications* [published the research](#).

-source: Imperial College, London

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## Upcoming Photobiology Events

**Photosensory Receptors and Signal Transduction Gordon Research Conference**, March 4-9 2018, Barga, Italy. [grc.org/programs.aspx?id=12955](http://grc.org/programs.aspx?id=12955)

**ASP biannual meeting**, May 12-15 2018, Tampa, FL. [photobiology.org/2018minisite](http://photobiology.org/2018minisite)

**PDT and Photodiagnosis 2018**, September 19-22, 2018, Munich, Germany. <http://pdt2018.com/>