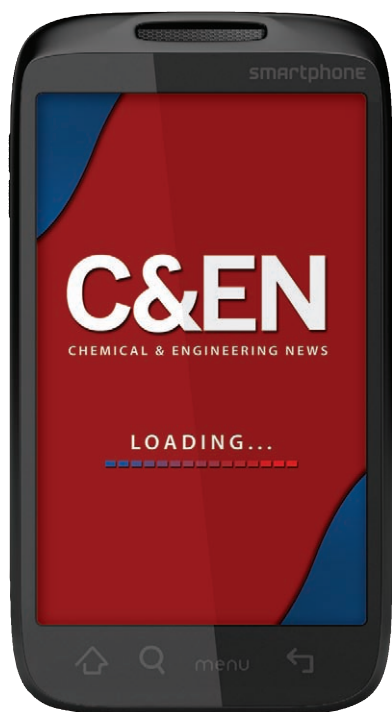


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The pages of NewscripTs are replete with examples of merchandise marketed with the **NONSENSICAL SLOGAN "CHEMICAL-FREE."** Usually, the NewscripTs gang writes these things up in the magazine, lets out some combination of a chuckle and a sigh, and moves on. But last month, a few chemists and journalists banded together to keep the movement going on a more regular basis and wipe the term chemical-free off the marketing map.

I got involved while covering June's National Organic Chemistry Symposium at Princeton University (see page 33). I spotted a colorful chalkboard outside an eco-friendly gift shop in downtown Princeton that was touting chemical-free sunscreen and bug spray. But I didn't have the time or inclination to lecture the shopkeeper on misleading advertising. So I did what any enterprising chemistry reporter would do: I snapped a picture of the offending sign with my phone and uploaded it to the microblogging website Twitter.

My tweet caught the attention of Mary Carmichael, a frequent contributor to *Newsweek*. In response, she created a photo blog (<http://bit.ly/krudzj>) where she solicits images depicting chemical-free products. A few days later, on June 12, Pulitzer Prize-winning author Deborah Blum of the University of Wisconsin, Madison, included my photo in an engaging blog post bemoaning a *New York Times* piece on chemical-free makeup (<http://bit.ly/qUcSqj>).

In response to the bloggers' work, Matthew Hartings, an assistant professor of chemistry at American University, wrote an eloquent essay about rebranding the term chemical-free (<http://bit.ly/iybPxV>). He also solicited ideas for alternatives to the term. I chronicled these efforts, and others' responses to them, at the social media curation site Storify (<http://bit.ly/kafKE3>). Hartings and Carmichael are still accepting chemical-free suggestions, so NewscripTs readers should feel free to log on and weigh in.

The garments Jennifer Keane has designed at Cornell University are decidedly not chemical-free. (Chemical-

free clothing probably wouldn't fly in a family magazine like C&EN anyhow.) Her masks and hoods are made to absorb chemicals, in particular the harmful gases that could endanger construction workers or firefighters.

The secret behind this **CHEMICAL-CAPTURING COUTURE?** It's a fiber impregnated with metal-organic frameworks (MOFs), which are cagelike compounds that can be customized to trap different chemicals. The material is the fruit of a collaboration between Keane's adviser, Juan P. Hinestroza, a professor of fiber science at Cornell, and

Omar M. Yaghi, an MOF pioneer

at the University of California, Los Angeles. Hinestroza tells NewscripTs that marrying MOFs and fibers wasn't easy at first. But postdocs Marcia Silva da Pinto and Cesar Sierra managed to "make it work" by using the fiber as a scaffold to build the MOF.

In addition to keeping workers safe, the MOF that the team chose for its prototype makes fabrics pleasing to the eye. The copper in the MOF lends a turquoise tint to the fibers, Hinestroza explains.

Because Keane received course credit for the design, her MOF creations were ineligible to hit the catwalk at Cornell's spring fashion show. But the student

designer has a bright future ahead—she's accepted a job with Adidas.

"Working with a designer was a great experience," both from learning and teaching perspectives, Hinestroza says. "You know you really know something when you can explain it to someone else, and through fashion, I was able to teach concepts of covalent bonding, color chemistry, and oxidation states."

CARMEN DRAHL wrote this week's column. Please send comments and suggestions to newscripTs@acs.org.

CARMEN DRAHL/C&EN



Poorly worded:
The sign that started a "chemical-free" movement.
MOF couture: For the discerning first responder.
(From left: Keane, model Allie Thielens, and Hinestroza.)

MARK VORREUTER

