FREE RADICALS

What's in a Name?

by Dale Hall

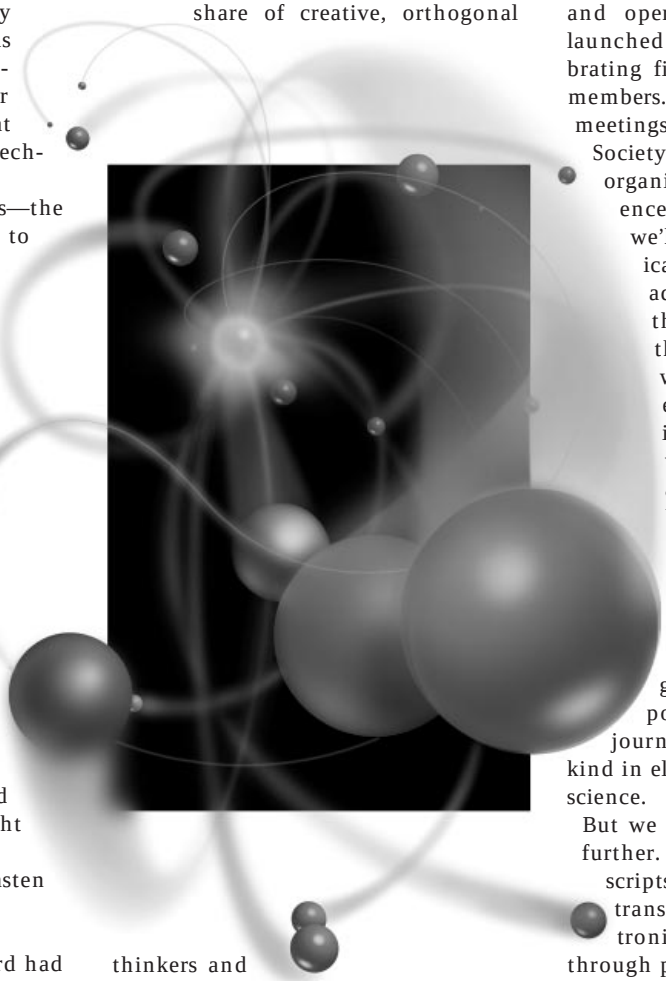
Some of you may wonder why this column is called Free Radicals. The Advisory Board picked the name, and I never asked why. My own suggestion was Currents, which eventually got picked up for another feature that covers news of interest to our technical community.

Getting back to Free Radicals—the name seems to fit, and I began to think about why. I rejected the obvious: this column is hardly radical, although it is, unfortunately for me, free. I moved on to this: a free radical is a molecular fragment or other species with an unpaired valence electron but no net charge, right? Digging a little deeper, I came up with the following possibilities:

- Free radicals play a key role in some polymerization mechanisms.
- Free radicals promote the addition of hydrogen bromide to unsymmetrical alkenes.
- Free radicals are generated and decay in oxidations brought about by enzymes.
- Free radicals are thought to hasten the aging process.

Somehow, I don't think the Board had any of the first three in mind, and I don't even like to think about the fourth. I was about to give up, but then I remembered that some molecules dissociate to form free radicals when exposed to light. For a while, I thought I was on to something: a free radical is a product of illumination—might we stretch that just a bit to enlightenment? Well, maybe that's not it either, much as I'd like to think so. It's unlikely that any readers will put this magazine down and shout, "I've found the meaning of life!" (If you do, however, please let us know.) In the end, I decided that the name of this feature doesn't reflect any particular property of free radicals, but rather their general nature: they're a kind of rogue species that can produce unusual reactions, and I suppose that's what this column is supposed to do.

That got me thinking that ECS needs free radicals elsewhere, too. Not the chemical ones, but the human ones. Fortunately, we're blessed with quite a few of them already. The Society has its share of creative, orthogonal thinkers and dedicated volunteers who want to make something happen. Yes, at times they can also be opinionated, unpredictable, and downright stubborn, but the Society is much more dynamic and effective because of what they do.



Free radicals have brought new technical subjects into the Society, maintaining our vitality and broadening our base. In recent years, the Society has provided a technical home for researchers in sensors and fullerenes, for example, as the result of visionary Society members. As new technical activities mature, some will, as they have in the past, form the basis for new Divisions. In fact, if you look back at the history of the Society and its Divisions, it's obvious that free radicals have been at it for decades. Yes, it's true that this increases the organizational complexity of the Society. That's a price we pay for free radicals. If it becomes a problem, other free radicals will find a way to solve it.

Free radicals have changed the look and operation of our **Journal** and launched ***Interface***, which is now celebrating five years of news to Society members. Others are trying to make our meetings more effective, build the Society into a truly international organization, and increase its influence and prestige. In the future, we'll need new species of free radicals to think about other advances. To mention just one: the Society's full-tilt entry into the electronic information age, which has already begun in earnest. Society headquarters is already instantly accessible via the Internet, and ECS has an outstanding site on the World Wide Web. Electronic submission of meeting abstracts has begun to take off; over 50% of all abstracts are coming in electronically, and the percentage is growing rapidly. The Society is poised to launch an electronic journal in July 1998, the first of its kind in electrochemical and solid-state science.

But we can conceive of going much further. Should all **Journal** manuscripts be submitted, reviewed, and transmitted to the publisher electronically, without ever going through paper or floppy disk versions? (Someday, of course, we'll be asking whether we need a paper publication at all.) Let's look a little further down the road. In the future, should our growing number of committees meet via video conferences before our semi-annual meetings to free up precious meeting time? Should we develop on-line, interactive hypermedia products to advance the awareness of our field, the teaching of electrochemistry and solid-state science, and the technical sophistication of the public? All of these ideas challenge our notion of what ECS is and can be, and implementing them would take hard work. But that's what free radicals do.

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Free radicals have an affinity for each other, and they often combine into clusters called committees. Our Society couldn't function without them. They nominate our officers, plan and organize our technical programs, select our meeting sites, keep us financially secure, and do all the other things that we expect and take for granted. Each Society president gets to form a group of high-energy free radicals into an ad hoc, long-range planning committee to help us prepare for the future.

Maybe you're an undiscovered free radical. Do you have an idea to make the Society better? Pack your unpaired electron into a suitcase and bring it to the next ECS meeting. Or write or call Society or Division officers, committee members, or headquarters staff and share your idea with them. Tell them that if enough people like your idea, you'll be glad to help put it into practice. Maybe you'll start a chain reaction. ■

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http://www.electrochem.org

"Members Only" Section—is the newest addition to the ECS Web site. Now ECS members can exchange resumes and job listings, join a private scientific discussion forum, and access the membership directory.

Meeting Abstracts—Now you can access any abstract from any upcoming meeting for up to six month after the meeting closes. For most meetings, you can access those abstracts as early as two months in advance of the meeting.

Don't forget the easiest way to submit your abstract: ECSTASI Online (version 2.0 released Fall 1997) and E-mail have both been been enhanced to accommodate virtually any type of pure word processor file in its native format.

New Electronic Journal—Coming July 1998: ECS's new rapid-publication, electronic journal: *Electrochemical and Solid-State Letters*. This monthly, peer-reviewed journal will combine rapid dissemination of important scientific and technological studies with wide distribution, making it valuable for both authors and readers. Watch the ECS home page for the debut of its electronic edition, *Letters Online*.

Interface—Starting with the Spring 1998 issue, you can enjoy even more articles and news when you visit the online edition of ***Interface***, ECS's lively, colorful, members magazine.

With new things happening at ECS almost weekly, be sure to bookmark the ECS home page on the Web and visit often!