

Available 7 November on  
**THE INSTITUTE  
ONLINE**

[www.ieee.org/theinstitute](http://www.ieee.org/theinstitute)

### Plug-in Hybrids Conference Covers the Challenges

Learn what industry experts have to say about the technology hurdles and policy obstacles for commercializing plug-in hybrid cars.

### IEEE RECOGNIZES RAILROAD TICKET MACHINE

Read about the technology behind this new IEEE History Milestone.

### RADIO AND WIRELESS SYMPOSIUM

The symposium, taking place 22 to 24 January, will cover new concepts and breakthroughs for the next generation of radio and wireless systems.

**43** For that special someone—a personal submarine!

## NEWS

### 10 California to Set Future of EVs and Fuel-Cell Cars

The state is mulling over a change in policy that could deliver or doom alternative vehicles. **By Peter Fairley**

13 Transistors Go Vertical

14 Oslo Metro Takes a Greener Track

16 Superconductor Firm Feeling the Heat

18 A World Wide Web of Censorship

20 **THE BIG PICTURE** This concept car does the twist.

## OPINION

**6 FORUM** Batteries on the move and a must-read for everyone at NASA.

**8 SPECTRAL LINES** The second IEEE Spectrum/Make DIY award goes to two hobbyists, whose controller board for trail cameras helps catch creatures that go bump in the night.

**56 REFLECTIONS** A billion amateurs enhance the Internet—for free. **By Robert W. Lucky**

## RESOURCES

**43 HOLIDAY GIFTS** This year's holiday buying guide features a submarine of your very own, an airplane that fits in your hand, a hands-free lawn mower, and color-coded tap water.

**5 THE BACK STORY** In reporting our lead news story, Peter Fairley encounters resistance when he explores the new rapid-charge battery.