

BEST OF WHAT'S NEW 07

# TOP TECH AWARDS

# POPULAR SCIENCE

THE FUTURE NOW

**BOOM**  
OF THE MONTH

p.18



Inside Russia's "Father of All Bombs"

## 100 BEST INNOVATIONS OF THE YEAR

The Audi R8: Lamborghini Power to the People p.63



The Personal Jet Has Arrived p.52



Finally! True 3-D on Your TV p.59



Real Mobile TV p.78



Bionic Grip p.90



Solar Salvation p.101



The Cable-Free Laptop p.36

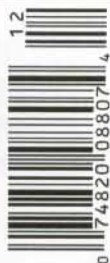


The Infinite-Gear Bike p.42

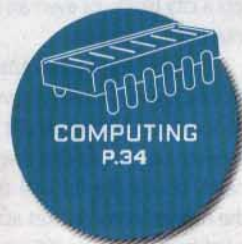


Crystal-Clear Cell Calls p.74

POPSCI.COM



DECEMBER 2007 US \$4.99 CAN \$5.99



# BEST OF WHAT'S NEW '07



**Innovation inspires innovation.** Efficient thin-film solar technology (winner, 1993) leads to **panels so inexpensive, they could blanket city skylines** (page 101). GM atones for killing the all-electric EV1 (winner, 1996) with the **plug-in Chevy Volt hybrid** (page 65).

The iPod (winner, 2002) begets the **iPhone** (page 73).

Turn the page to see these and 97 other revolutionary technologies that will drive **the next 20 years of innovation.**

MOUNTAIN HARDWEAR  
STIMULUS**THE LIGHTEST  
WATER WEAR**

**TO CREATE** a six-ounce water-proof jacket (nearly half the weight of others), designers nixed the usual rain-repelling fabrics. Instead they applied a polyurethane coating to a new, strong yet thin material that resembles pantyhose but is made from a nylon yarn so light that 100 miles of it weighs less than one pound. **\$175; mountainhardwear.com**



BUSHNELL ONIX400

**MAPS THAT KNOW THE WEATHER**

**A DRIZZLE ANNOYS HIKERS;** a storm can kill them. The Onix400 is the first handheld GPS unit to show real-time weather fronts rolling in. It pulls data from XM Satellite Radio's meteorology service and transforms it into illustrations—such as rain patterns—layered over maps. And its aerial photos can help you spot a place to sit out a storm. **\$500, plus \$10 per month; bushnellgps.com**



ARC'TERYX R320

**A HARNESS THAT RELIEVES PRESSURE**

**THE MOST COMFORTABLE** rock-climbing harness yet distributes the climber's weight over three times the usual surface area. Its designers fanned out the belt strap's long, horizontal fibers (removing the vertical ones altogether) and held them in place with 11 layers of glue, fabric and mesh. The same tech could make seatbelts and backpacks stronger and cushier. **\$125; arcteryx.com**



MAMMUT PULSE BARRYVOX

**SAVING PEOPLE WHO ARE BURIED ALIVE**

**AVALANCHE VICTIMS'** chances of survival plummet if they're not found within 20 minutes. This transceiver, worn across the chest, focuses rescuers' limited time on those still alive under the snow. An accelerometer detects the subtle chest movements that indicate breathing, and the unit radios info ("Live body here!") to other units within 65 yards. **\$400; mammutusa.com**

**TALES OF TESTING:** MARK ANDERS, AQUA-ADVENTURER

YAMAHA FX CRUISER SHO WAVERUNNER

**ULTRALIGHT HULL =  
WICKED WATERCRAFT**

**AS SOON AS I GRABBED** the FX Cruiser's throttle, my stomach flipped like I was on a roller coaster. The 840-pound water rocket, the lightest ever of this size and power, goes from 0 to 30 mph in less than two seconds. It sheds pounds by using a new engineered clay to hold together the hull's fiberglass and resin. Yamaha diced clay into nanoscale slices and layered these in an interlocking pattern. This makes the material stronger than loosely packed grains, so less can be used, cutting weight by 25 percent. Add a supercharged four-stroke engine, and the airy craft soars. **\$12,800; yamahamotors.com**



VÖLKL TIGERSHARK

**SKIS THAT SHIFT  
MODES WITH A CLICK**

**WHY BUY TWO** pairs of skis for different conditions? This set morphs at the flip of a switch: stiff for speeding down hard-packed snow or slaloms, flexible for accommodating tired legs or loose powder. When you click the lever, carbon-fiber rods down the length of each ski push against springs at the tip and become tenser, making the ski more rigid. **\$1,450; volkl.com**



CLOCKWISE FROM TOP LEFT: LUIS BRUNO (5); COURTESY MARK ANDERS

REPORTED BY Lauren Aaronson, Mark Anders, Berne Broudy, Tom Clynes and Matthew Cokeley