

Robo-Rooters

Need to scour out a reactor core? Matt Cole has a bot for that.

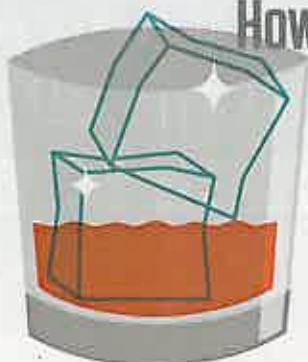
Alpha geek Matt Cole



Spill something in a nuclear reactor core and you can't just send in the janitor to clean it up. (Well, you can, but just once.) What you can do, though—over and over again—is send in remotely operated robots designed by Matt Cole. At 33, Cole is chief engineer of Colorado-based SA Technology, which pulls in more than \$20 million a year making bots for nuke facilities. For a kid who taught himself to weld, mill, and lathe before he was old enough to vote, it's a dream gig. "We do the worst, the hottest, the weirdest jobs," Cole says. Like what? For starters, his creations mop up areas that are so radioactive they've been dubbed infinity rooms—take a Geiger counter in there, and the needle goes past 11. ¶ Each task gets its own unique bot. For example, if a piece of nickel lodges in a pipe at a reactor plant and turns into the extremely radioactive and dangerous isotope cobalt-60, Cole and his team of engineers might whip up an agile bot that can go in, extend a telescoping arm, spray liquid nitrogen to cool the pipe, and then cut away the radioactive segment. Other bots are designed to plunge into giant waste tanks and hose down radioactive materials like cesium-137. ¶ SA Technology bots have gotten gigs at every major nuclear weapons facility in the US as well as most active nuclear power plants. And because more and more Cold War-era weapons facilities are being decommissioned, business is mushrooming. —JOSHUA ZAFFOS



How To Make Crystal Clear Ice



Perfect cocktails deserve perfect ice—and by that we mean perfectly clear ice. The opacity of standard cubes is the result of air bubbles and cracks that form as the last bit of water freezes. To outwit physics, you can buy an expensive restaurant ice maker—or you can use this simple process. —Camper English

GO BIG Ditch the ice tray and use a large vessel like a thick plastic bowl or, better yet, an insulated cooler. Fill it with water and stow it in the freezer. **WAIT** The H₂O can take a day or so to solidify. Remove the mini berg when it's solid on the outside but still has a liquid core. **DRAIN** With an ice pick, bread knife, or screwdriver, make a hole to release the trapped water. **SEGMENT** Score a grid onto the slab of ice, then pry it apart into cubes—the ice should break cleanly along the seams. Bigger cubes are ideal because they melt more slowly.