youths who know how to create their own apps, put up their own solar panels, grow their own organic food."

This vision is not merely green for green's sake; environmentalism without corresponding social progress has never been the focus for Jones. He prefers to address multiple social issues together.

"Our urban youths need 21st century jobs, not 19th century jails," he says. "They need access to the tools, training and technology that will let them create a future that works for them. So I am fighting for that."

For more information about Van Jones and his work, visit vanjones.net. ■

ARLENE BLUM

Scientist, author and mountaineer

In January 1977, biophysical chemist Arlene Blum and biochemist Bruce Ames, both of the University of California, Berkeley, published an article in the journal *Science* stating that Tris, a chemical flame retardant widely used on children's pajamas, was a mutagen. Their research, alongside findings by the National Cancer Institute, had an immediate impact. By April, the U.S. Consumer Product Safety Commission had banned the chemical Tris in children's pajamas, and it has not been used since.

Last year Blum once again celebrated a success over Tris, this time working on improving standards with furniture manufacturers. The tireless septuagenarian has no plan to stop. She's now working as director of the Berkeley-based Green Science Policy Institute (which she founded in 2008), to further reduce unnecessary uses of flame retardants and to educate people about how to avoid certain chemicals that contain harmful compounds.

In the decades between her first work on Tris and her more-recent work in this area, Blum followed her other career path of climbing mountains. After being told that women had no place in high-altitude mountaineering, Blum set about proving that they did. She led the first all-woman ascent of Denali, the highest peak in North America, in 1970. She took a 15-month trek through eight countries between 1971 and 1973 on which she climbed multiple peaks. She was the first American woman to attempt to summit Mount Everest, in 1976. And, in 1978, she led the first American/first all-woman ascent of Annapurna I, often considered the most dangerous of the world's tallest peaks (those above 8,000 meters, or 26,247 feet).

In the decades between her scientific work exposing the health risks of chemical flame retardants and more-recent work in this area, Arlene Blum followed her other career path of climbing mountains.

Arlene Blum, shown here in the Goat Rocks Wilderness of Washington state, is an accomplished chemist and mountaineer.

COURTESY ARLENE BLUM

Besides being an exceptional scientist and mountaineer, Blum has proved to be an able writer, penning *Annapurna: A Woman's Place* (1980) and *Breaking Trail: A Climbing Life* (2005).

It was nine years ago that Blum made her return to science, finding herself dismayed that Tris had made a comeback, this

"Focusing on outcomes, not motives, can turn gridlock and conflict into a unifying solution to our common energy challenge."
—Amory Lovins

JUDY HILL LOVINS

Amory Lovins, the founder of Colorado's Rocky Mountain Institute, is a leader in the clean-energy field.

time in furniture as a primary flame retardant used in foam. An obscure fire-safety regulation in California was mandating heavy doses of chemical flame retardants. And because of the size of the California market, its law had become a de facto national standard. On top of this, Blum found that the retardants did not actually improve fire safety. So she set her sights on fixing the problem. In 2013, after nearly eight years of meetings and studies, and a high-profile series on the topic in the *Chicago Tribune*, California Governor Jerry Brown revised Technical Bulletin 117, which eliminated the need for flame-retardant chemicals in furniture.

"For nearly four decades, the old standard led to some of the most harmful chemicals around in our furniture, dust, wildlife, and human population—especially children," Blum says. "That's all been changed."

While the phasing out of furniture with flame retardants is what Blum calls a "messy transition"—stores still have plenty of inventory—she says the manufacturing process of foam has changed. It is her understanding that a lot of manufacturers are now making only foam for furniture without flame retardants, she says.

Blum and the Green Science Policy Institute have turned their attention to two main goals: changing standards so that chemical flame retardants are not used unnecessarily, and educating consumers and manufacturers about six classes of chemicals the institute has found to be most problematic (including bisphenols and fluorinated waterproofing).

In many cases, flame retardants used in building insulation are ineffective or unnecessary, according to Blum. The same goes for flame retardants used in electronics cases to meet a standard that products not ignite if they come into contact with a small flame. It's this type of unnecessary use of chemicals that Blum wants to see disappear.

Meanwhile, the Green Science Policy Institute's Six Classes program has been successful at educating thousands of consumers, as well as representatives of some of the largest manufacturers and retailers in the country, about the health impacts of particularly dangerous chemicals, how to avoid them and what alternatives exist.

The program's success has made Blum optimistic. "I'm encouraged by how manufacturers and retailers are listening to the message of reducing the use of whole classes of harmful chemicals," she says. "Can you imagine if major retailers and manufacturers cut their use of harmful chemicals by 50 percent? That would reduce many long-term health problems."

To learn more about the work of Arlene Blum and the Green Science Policy Institute, visit greensciencepolicy.org. ■

AMORY LOVINS

Author and expert energy consultant

As a 42-year veteran of the energy industry, Amory Lovins has been banging the drum about renewable energy since long before putting solar panels on your roof seemed like a smart idea. Today, via the nonprofit consulting firm Rocky Mountain Institute that he co-founded, as well as through his writing, such as in the book *Reinventing Fire* (2011), Lovins is working on the ambitious goal of getting the United States entirely off fossil fuels by 2050.

It sounds like an unreasonably idealistic goal, except that Lovins is both a verifiable genius and a highly practical man. He's also someone who has been obsessed with energy for most of his life. By the age of 22