UC SANTA BARBARA

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Here Comes the Sun

It’s being called a clean energy revolution. The push to develop, make more accessible and implement renewable energy sources is a global imperative — especially amidst a changing climate.

But is it really a revolution when its roots run thousands of years deep? The use of solar energy dates back to Stone Age China; solar today has never been more essential as the world looks to convert its energy systems to clean alternatives.

“The direct conversion of the sun’s energy into electricity by semiconducting material known as solar cells has moved solar once again to center stage in the world, crowned as ‘the new king of electricity,’ by the authoritative International Energy Agency, said John Perlin, a visiting scholar in physics at UC Santa Barbara and expert on all things solar. “A goodly portion of ‘Let It Shine’ shows how this new solar revolution has been achieved.”

“Let It Shine: The 6000-Year Story of Solar Energy” (New World Library) is Perlin’s history of solar, which has now been re-released — with a new author’s forward as well as a forward by energy scholar Mark Jacobson of Stanford — in paperback.

“‘Let It Shine’ focuses on one of the pillars of the energy transition, solar energy,” noted Mark Z. Jacobson, director of Stanford’s Atmosphere/Energy Program and professor of civil and environmental engineering, in the new forward for the paperback edition. “Solar is an essential energy source needed to move us away from fossil fuels to a clean, renewable energy future. It has provided warmth and

energy for societies in the past and will continue to do so for societies in the future, but to a much greater degree. This book gives us a view of the past and present so that we can learn from it for the future."

Widely seen as emerging technology in the 20th century, the story solar in fact begins in ancient times. Perlin's book explores that history in comprehensive fashion. Among the highlights: Six thousand years ago the Chinese built with the sun in mind for heating and cooling; the ancient Chinese and Greeks planned whole cities so every citizen could solar heat their houses; both Socrates and Leonardo da Vinci vigorously advocated solar solutions; two British scientists in 1875 generated the first electrical current generated from a solar cell by light; solar desalinating kits designed by scientist Maria Telkes saved the lives of downed American aviators in the south Pacific during World War II. Telkes came to be known as the "Sun Queen" for her many contributions to solar energy science. They're all in the book, with so much more.

The past of solar energy, according to Perlin, is essential to its present — and its future. The ideas have evolved over the centuries, but the value of sunlight as a benefit to humanity is holding strong.

"The book makes it abundantly clear that solar energy has a long and glorious past – a prologue in fact – that it is as bright and diverse as its future will be," Perlin said. "The publication of the paperback edition could not have been better timed. It comes out as the sun remerges as a significant energy source for humanity, as it has multiple times over the last six thousand years.

"The information in 'Let It Shine' has become even more relevant than when the hardcover was published," he continued, "as the need for expanding solar has become imperative to avoid a carbon-induced catastrophe and its growth over the last nine years has proven that solar is up to the challenge."

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we

draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.