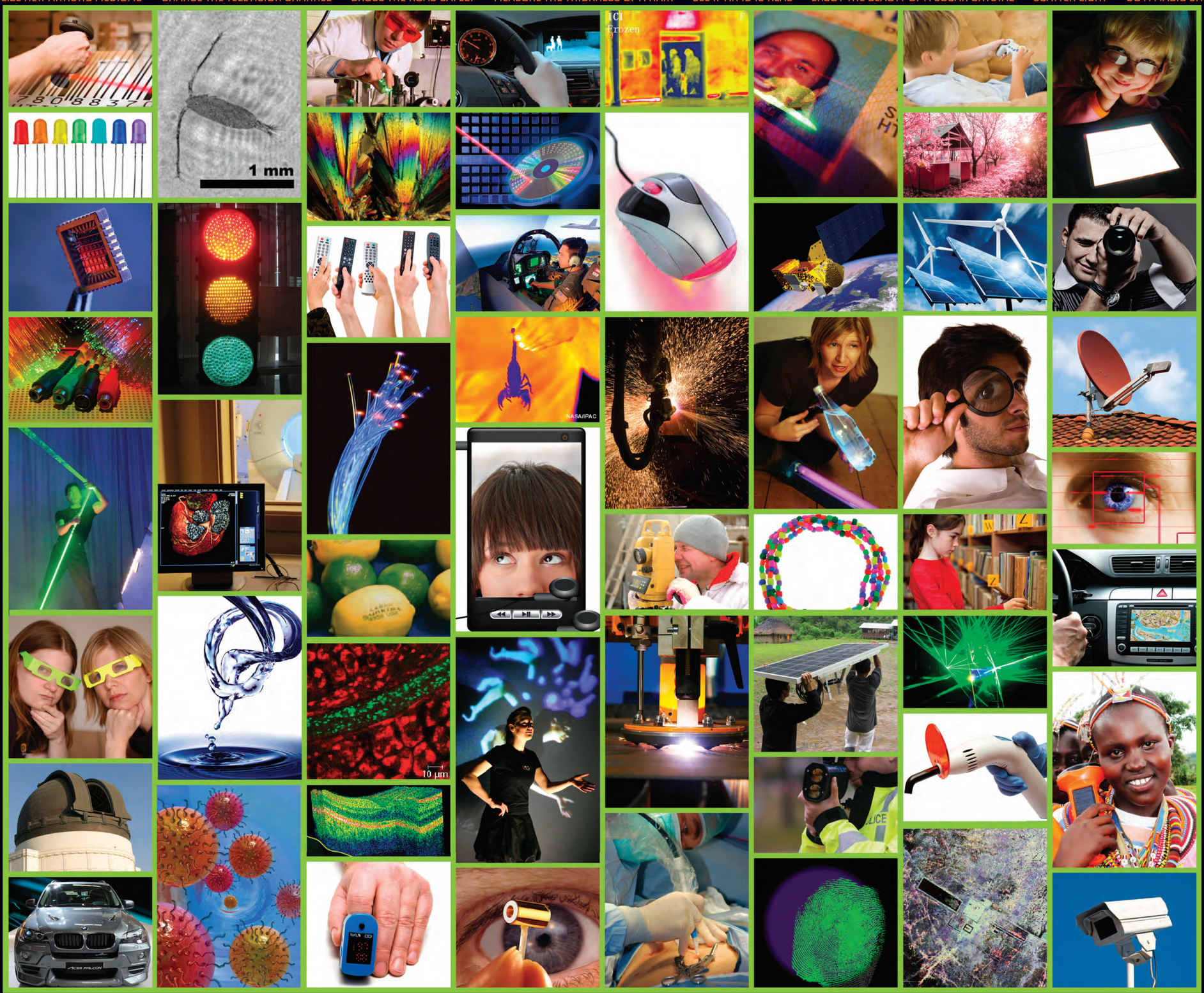
What can you do with Optics and Photonics? Well, for starters...

GENERATE COOL STAGE EFFECTS · ENGAGE YOUR BRAIN · MONITOR THE EARTH'S ATMOSPHERE · OBSERVE OBJECTS IN OUTER SPACE · CREATE COMPLETELY NEW SOURCES OF ENERGY · MAKE DENTAL PROCEDURES FAST · REDUCE GREEN HOUSE GAS
UTILIZE NEW ARTISTIC MEDIUMS · CHANGE THE TELEVISION CHANNEL · CROSS THE ROAD SAFELY · MEASURE THE THICKNESS OF A HAIR · SEE IF AN ID IS REAL · ENJOY THE BEAUTY OF A SUGAR CRYSTAL · SCATTER LIGHT · DO A MAGIC SHOW

CLEAN ARSENIC OUT OF WATER · TRANSMIT LARGE AMOUNTS OF DATA OVER DISTANCES · DESIGN NEW GENERATION CARS · TRAIN PILOTS IN SIMULATORS · FIND HEAT LEAKS IN YOUR HOUSE · PLAY COMPUTER GAMES WIRELESS · POWER THE INTERNET · FIND ARCHEOLOGICAL AREAS · FIND CRIME EVIDENCE · SEE INVISIBLE CREATURES · CHECK OXYGEN LEVELS IN BLOOD



MANUFACTURE AN IPOD · SEE THINGS BIGGER · FIND YOUR WAY WITH A GPS · MAKE SURE ONLY YOU CAN OPEN THE DOOR · SCATTER LIGHT · DESIGN YOUR OWN EXPERIMENTS · SATELLITE DISHES
CUT METAL · NO MORE STICKY LABELS ON PRODUCE · MAKE SURE LETTUCE IS SAFE TO EAT · FIND CELLS THAT MIGHT BECOME CANCEROUS · SEE SCORPIONS IN THE DARK · USE A COMPUTER MOUSE

GET LOTS OF GREAT COLORS OF LIGHT · USE A DIGITAL CAMERA · KEEP DRIVERS SAFE · SEE PEOPLE ON THE ROAD AT NIGHT · PROVIDE ENERGY IN REMOTE COMMUNITIES · DO A LAND SURVEY · STUDY A DROPLET OF WATER IN MOTION · CLOSE SURGICAL WOUNDS WITHOUT STITCHES
ENJOY A LASER SHOW · SCAN A BARCODE · PLAY A DVD OR CD · SEE INSIDE OF PEOPLE'S BRAINS · ILLUMINATE THE DARK · SEE IN RAINBOWS · ENSURE PERSONAL SAFETY · MANUFACTURE COMPUTER CHIPS · MAKE STUFF WITH ROBOTS

What exactly is Optics and Photonics?

What do telescopes, microscopes, computers, fluorescent lights, cameras, video game controllers, DVD players, barcode scanners, laser light shows, and the Internet all have in common? All rely on the application of optics and photonics. Just about everywhere in the world, optics and photonics affects everyday lives.

Optics and photonics is all about the science and engineering related to light. This includes the entire spectrum of visible light and other invisible light, such as microwaves and x rays. Professionals in the field of optics and photonics examine the behavior and properties of light, and how light interacts with all kinds of materials – even human tissue. They work with devices and instruments that detect, manipulate, and otherwise control it.

Optics and photonics puts light to work, just as electronics uses electrons and electricity to do work. The possibilities are endless for using optics and photonics to solve many of the world's problems. New discoveries open the door to creating new clean energy sources, diagnosing and treating illnesses more effectively and quickly, creating a more safe and secure world – and much more.

Do you want to explore more?

For cool websites that involve optics and photonics visit:

www.spie.org/resources

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