Laser Technology

By Naldo Camarones

Laser technology is used in almost every scope of life, from the miniscule lasers in CD players to the

lasers used to scan groceries in the checkout line to the massive lasers in aeronautics design. The discovery of laser technology and the subsequent building of ever−improving lasers have benefited the human race tremendously, particularly through medical advances. Medical lasers cause medical procedures to be quicker, better, and easier than their traditional counterparts. The only drawback is increased cost.

In 1917, Albert Einstein was the first person to suggest the basics of what would become lasers, by discussing the theory of Stimulated Emission, which is a type of electron transition in which a photon is emitted from an atom causing a chain reaction with other atoms to repeat the action. In fact, the word laser is an acronym for Light Amplification by the Stimulation Emission of Radiation. Charles Townes, an American physicist, further developed the idea with microwave (invisible) light in the mid− to late−50's and Theodore Maiman built the first working optical (visible) light laser in 1960. Improvements and variations on hundreds of kinds of lasers continue to be made since the 1960s. Those involved in quantum mechanics have been studying some form of lasers, either in theory or in reality, since the 1920s. Uses for laser technology are widespread and are included in such important fields as medical/surgery, communications, design, manufacturing/industry, and research.

Medical/Surgery

The advancement of medical lasers has vastly improved the ease and success of surgery. The cost, however, is greater than that of other treatments, though scarring is much less with lasers and lasers work much more quickly than older surgical options. Incisions are more precise and easier to control. Some medical areas in which lasers have deeply refined treatment options are in laser eye surgery, oncology, neurosurgery, cardiology, dermatology, veterinary surgery, and dental surgery.

Communications Televisions, telephones/ cellular phones, and computer systems all benefit from the use of lasers. Lasers are able to carry the huge amounts of channels and frequencies required by these high−tech devices. Lasers have proven the best communication device to have in the space age.

Design

Lasers have transformed the world of design by making it possible for designers to perform with precision that was previously unavailable. Lasers are used to design digital and three−dimensional objects with much more ease and accuracy through scanning, cutting, copying, and digital archiving. From designing a building to designing landscape, lasers prove to be the best option for fast and easy design.

Manufacturing/Industry

Lasers have improved the manufacturer's ability to produce tenfold. For example, with a laser cutter, a clothing manufacturer can have fabric patterns cut much more quickly and more accurately in no time. A jeweler has much more precision on his side when employing lasers to work on fine gems. Airplane

designers can construct an aircraft much more efficiently and with greater results using laser technology.

Research

The use of lasers in research enables scientists to uncover much more detail and detect very slight movement when studying matter. The lasers can be tailored to only respond to certain colors or movements and, in that way, they provide much more specialized work in research environments.

The world of laser technology is always expanding by producing new applications and ways to benefit people. The dependence that the modern culture has on lasers is amazing considering that it was not prevalent until the past forty years.

If you need more information and resources about laser related topics, visit:

http://www.laserx.info

LASIK Surgery − How The Excimer Laser Works

By Nicola Kennedy

The Excimer laser is a form of ultraviolet chemical laser, and is the key element that has made laser eye surgery possible. Though Excimer laser was originally used in semiconductor manufacturing in the 1970s, its use in eye surgery is now fairly widespread. While working at the IBM research laboratories in 1982, Dr. Rangaswamy Srinivasin and his research team discovered the potential of the Excimer laser in interacting with biological tissue. An ophthalmologist, Dr. Steven Trokel, explained its connection with the corneal tissue. And this was how LASIK eye surgery came into existence.

There are several types of lasers, but excimer is the preferred choice when it comes to corrective eye surgery. This is due to the fact that excimer is the most technologically advanced laser type. The

excimer laser is, literally, a cool laser. That is, it precisely removes the desired part of the corneal tissue, without heating up or damaging the adjacent tissue. Quite amazingly, the excimer laser is so precise that it is capable of removing 0.5% of a human hair's width at a time. That fact itself is enough for patients to believe that excimer−assisted eye surgery is not a gimmick, but a true technology leveraged procedure.

With the computer technology at its disposal and the precision offered by the laser, LASIK surgery has emerged as the number one choice for patients with refractive error. Since the excimer laser emits cool, minute beams that make precise incisions on the surface of the cornea, a dedicated technician operates the machine while the ophthalmologist performs the surgery.

Your eyes are your window to the world and your sight is the most important of the five senses. Hence, it is all the more imperative that, if need be, you go for an eye surgery that is reliable and has minimal side effects. With the high−precision technology of the excimer laser and the overall reliability of the procedure, LASIK is the most prevalent of corrective eye surgeries.

Nicola Kennedy publishes articles and reports and provides news, information and views about Lasik Eye Surgery and the background and

history of laser eye surgery

at Your Lasik Information.

This Free E−Book has been brought to you by *Natural−Aging.com*.

100% Effective Natural Hormone Treatment

Menopause, Andropause And Other Hormone Imbalances Impair Healthy Healing In People Over The Age Of 30!