



# Lasers in scientific research

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# Lasers in science

- 1. What actually is laser?
- 2. The first working prototype of a laser.
- 3. The Spectroscopy.
- 4. Space mission.
- 5. Conclusion.

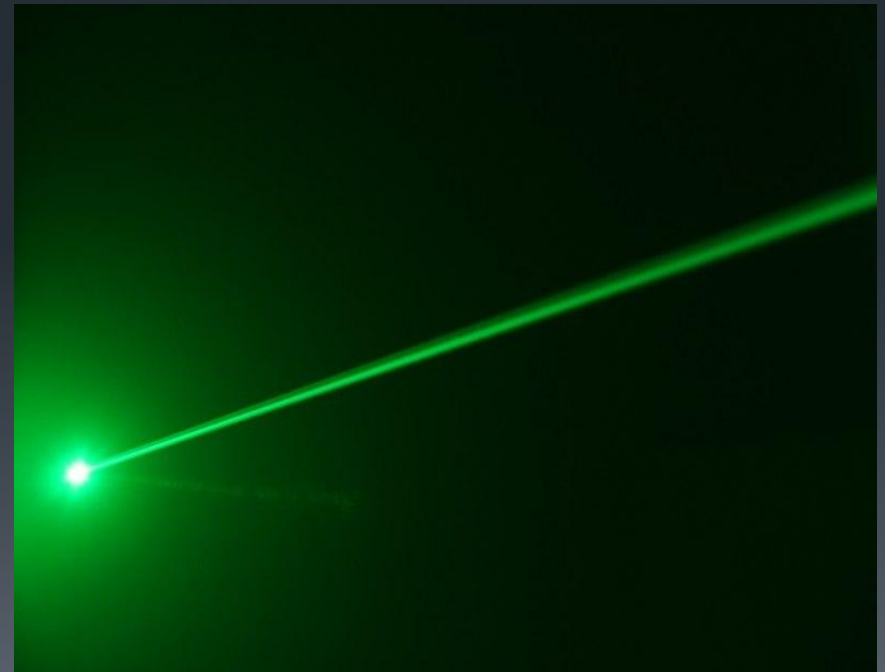
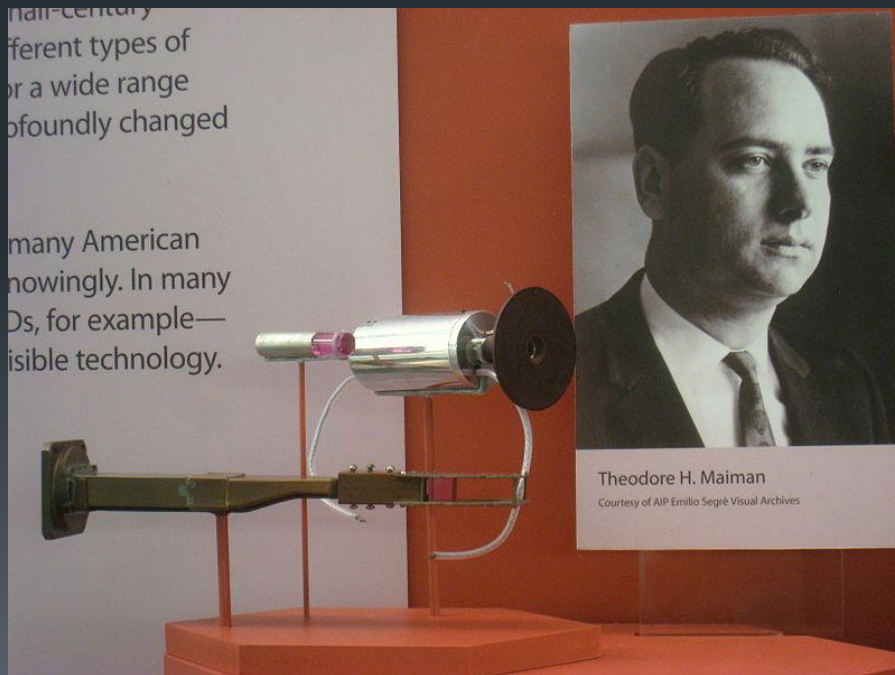
# 1. What actually is laser?

- Laser - a device that converts various types of energy (light, electric, thermal, chemical, etc.) into the energy of coherent monochromatic light radiation. L.A.S.E.R means Light Amplification by Stimulated Emission of Radiation.



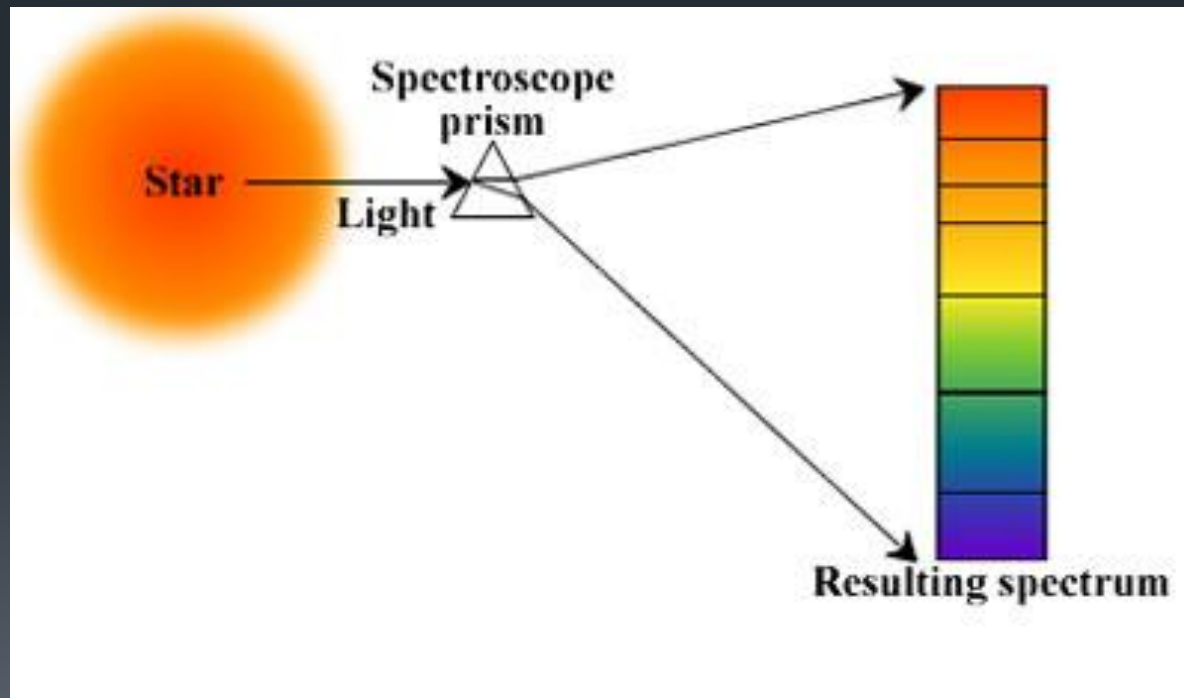
## 2. The first working prototype of a laser.

- Theodore Maiman builds the first working prototype of laser at Hughes Research Laboratories in Malibu, California. This laser uses synthetic ruby as the active medium and emits a deep green beam of coherent light.



# 3. The Spectroscopy.

- Modern laser sources produce monochromatic light with virtually any wavelength. The high energy stored in these pulses can be focused on the researching sample a spot comparable in size to the wavelength, which makes it possible to investigate nonlinear optical effects.



## 4. Space mission.

- During the flight to the moon, several special angular reflectors were delivered by vehicles. With the help of a telescope, a specially focused laser beam. It became possible to calculate the distance to the moon, know only light speed and travel time of laser beam .





Thank you for attention!