

Ibn al-Haytham

PAST
MASTER
SERIES



Ibn al-Haytham was born Abu Ali al-Hassan ibn al-Hassan ibn al-Haytham in Basra (Iraq) in 965 A.D. He is known in Europe as Alhazen or Alhacen.

Ibn al-Haytham was a prolific writer on all aspects of science and natural philosophy, from optics to astronomy. More than 200 works are attributed to him. His influence on European scientists is due to Latin translations of his main works, such as *De aspectibus* or *Perspectiva*, *Kitab al-Manazir* (*Book of Optics*) and *De Speculis Comburentibus*—On the Paraboloidal Burning Mirror. The *Book of Optics* was used by Roger Bacon, Witelo and Pecham. Pecham paraphrased it as his work, *Perspectiva communis*. Translations of Ibn al-Haytham's other works were also used by Lorenzo Ghiberti, Kepler, Snell, Beekman, Fermat, Harriot and Descartes. All of them except Descartes referred to Ibn al-Haytham directly.

In the chapter on Burning Mirrors of Circular Shape (*Book of Optics*), Ibn al-Haytham alludes to the convertibility of the light of the sun into energy and heat. He puts forward the thesis that if a concave mirror is placed opposite the sun, the rays which proceed from the body of the sun along lines parallel to the axis of the mirror are reflected from the surface of the mirror to its axis.

It is possible to establish a system of solar heating or energy based on the ideas of Ibn al-Haytham. Today, there are several solar energy centers working with the concave mirror principle!