PRESS-RELEASE

Max Planck Institute of Quantum Optics

and

Munich-Centre for Advanced Photonics

Garching, 7 December 2016

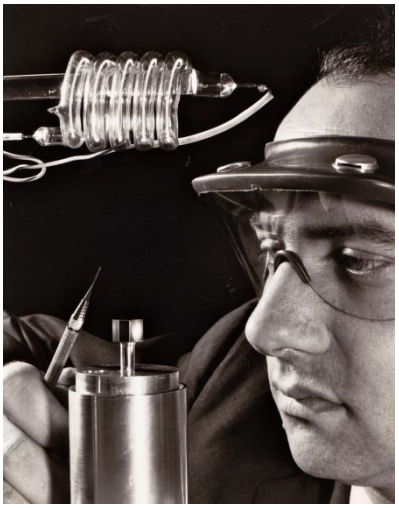
The first laser: on show at MPQ

The Max Planck Institute of Quantum Optics in Garching presents the world's first ever laser.

In the year 1960, a new era of technology began when Theodore Maiman (photo) presented the first functioning laser to the world: a small device comprising a flash lamp, a ruby and a metal case. Maiman's original laser has survived the intervening decades, and can now be viewed as part of a small exhibition in the foyer of the Max Planck Institute of Quantum Optics (MPQ) in Garching. Alongside the laser, Maiman's original laboratory logbook containing his sketches of the groundbreaking device is also presented for viewing.

We cordially invite all journalists to the exhibition opening
on December 12, 2016 at 3PM in our foyer

The exhibition will be open for public daily from 9AM to 5PM
at the Max Planck Institute of Quantum Optics, Hans-Kopfermann-Str.1, 85748 Garching.
Admission is free!



In 1960, Theodore Maiman succeeded in concentrating light in a hitherto unprecedented manner. He had made history by producing so-called coherent light with a special light source later called the 'laser'.

Here, Maiman focused on the essentials. He later said of the laser's construction: "*I have used things that I already had. I wasted neither time nor money on developing a special lamp or a new type of crystal. Instead, I used ruby, which occurs in nature and even then could be produced industrially in very high purity. I simply ordered and purchased the ruby rods for my experiments, just like the flash lamp. The rest was pure craftsmanship*."

In a laser, a mirror reflects light repeatedly through the ruby crystal. In the crystal, ever more atoms are excited and send out red light. These simultaneously animate additional atoms, emitting even more red light. The result is a very intense beam of light not occurring in nature.

The ingenious design can now be seen together with Maiman's original laboratory records in the foyer of the Max Planck Institute of Quantum Optics. Kathleen Maiman, the laser pioneer's widow, provided the items for exhibition. "We are very pleased that Kathleen Maiman has given us the opportunity to present this historically important device at our institute," said Professor Ferenc Krausz, Managing Director at MPQ.

Theodore Maiman's historic invention heralded a triumphant advance of technology in the intervening decades. This is evident not least in the laboratories of the Max Planck Institute of Quantum Optics, where the latest laser technologies are continuously used to expand the frontiers of our knowledge. *Thorsten Naeser*

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