ADVANCED PHOTONICS | ADVANCED PHOTONICS NEXUS

Website
advphoton.org | ap.researching.cn

A Nobel prize timeline **light, masers and lasers,** and their applications

1901 Physics — **Röntgen** — X-rays

1902 Physics — **Lorentz and Zeeman** — The Zeeman Effect, Electron Oscillator Model

1903 Physiology or Medicine — **Finsen** — Phototherapy-use of UV Light to Treat Lupus

1907 Physics — **Michelson** — The Michelson Interferometer & Precision Measurements

1908 Physics — **Lippmann** — Colour Photography Based on Interference

1911 Physiology or Medicine — **Gullstrand** — Description of the Refractive Optics of the Eye

1912 Physics — **Dalén** — Solar-Based Regulator for Buoys and Lighthouses

1918 Physics — **Planck** — Energy Quanta

1919 Physics — **Stark** — The Stark Effect

1921 Physics — **Einstein** — Photoelectric Effect & Services to Theoretical Physics

1922 Physics — **Bohr** — Atomic Structure and the Nature of Radiation

1923 Physics — **Millikan** — Elementary Charge and the Photoelectric Effect

1927 Physics — **Compton** — The Compton Effect

1930 Physics — **Raman** — Raman Scattering

1932 Physics — **Heisenberg** — Creation of Quantum Mechanics

1933 Physics — **Schrödinger and Dirac** — New Productive Forms of Atomic Theory

1945 Physics — **Pauli** — Pauli Exclusion Principle

1953 Physics — **Zernike** — Phase Contrast Microscope

1954 Physics — **Born** — Statistical Interpretation of the Wavefunction

1955 Physics — **Lamb** — Fine Structure of the H Spectrum (Lamb Shift, QED)

1964 Physics — **Townes, Basov, and Prokhorov** — Maser-Laser Principle

1966 Physics — **Kastler** — Precision Studies of Optical Resonances

1967 Physiology or Medicine — **Granit, Hartline, and Wald** — Physiological and Chemical Visual Processes in the Eye

Chemistry — **Eigen, Norrish, and Porter** — Flashlamp Pump-probe Studies of Chemical Reactions

1971 Chemistry — **Herzberg** — Molecular Spectroscopy

Physics — **Gabor** — Holography

1981 Physics — **Bloembergen and Schawlow** — Laser Spectroscopy

Physiology and Medicine — **Hubel and Wiesel** — Information Processing in the Visual System

1989 Physics — **Ramsey, Dehmelt, and Paul** — Atomic Clocks, the Ion Trap

1997 Physics — **Chu, Cohen-Tannoudji, and Phillips** — Laser Cooling and Trapping

1999 Chemistry — **Zewail** — Femtochemistry

2000 Physics — **Alferov and Kroemer** — Optoelectronics, Semiconductor Heterostructures

2001 Physics — **Cornell, Ketterle, and Wieman** — Bose-Einstein Condensation

2005 Physics — **Glauber, Hall, and Hänsch** — Quantum Optics, Spectroscopy, Optical Frequency Comb

2008 Chemistry — **Shimomura, Chalfie, and Tsien** — Green Fluorescent Protein GFP

2009 Physics — **Kao, Boyle, and Smith** — Optical Fiber Communications; Imaging and the CCD

2012 Physics — **Haroche and Wineland** — Individual Quantum Systems

2014 Physics — **Akasaki, Amano, and Nakamura** — The Blue LED and Energy-saving White Light Sources

Chemistry — **Betzig, Hell, and Moerner** — Super-resolution Microscopy

2018 Physics — **Ashkin, Mourou, and Strickland** — Optical Tweezers & Biophotonics; Chirped Pulse Amplification

2022 Physics — **Aspect, Clauser, and Zeilinger** — Quantum Entanglement

2023 Physics — **Agostini, Krausz, and L'Huillier** — Attosecond Pulses

Chemistry — **Bawendi, Brus, and Ekimov** — Quantum Dots