

BERZELIUS TREE #3

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Jons Jakob Berzelius

Discovery of element 58 cerium (1803)
Discovery of element 90 thorium (1815)
Discovery of element 34 selenium (1817)
Discovery of element 14 silicon (1824)

Mitscherlich law of isomorphism (1821)

Gustav's green salt (1828)

Bunsen burner
actinometry (1855) (with **Sir Henry Roscoe**)

elemental spectrum analysis (1860)

(with **Gustav R. Kirchhoff**)
Discovery of element 37, rubidium (1861)

(with **Gustav R. Kirchhoff**)
Discovery of element 55, cesium (1860)
(with **Gustav R. Kirchhoff**)

Kirchoff's circuit laws (1847+)
Concept of potential difference (1849)

Kirchoff's diffraction theory (1882/3), Kirchhoff's laws for electrolytes (1858/9), Kirchhoff's law of heat radiation (1858), concept of latent and specific heat (1858)

August Kundt
(Berlin, 1864)

Gustav H. Wiedemann
(Berlin, 1847)

Georg Quincke
(Berlin, 1858; Heidelberg)

Wilhelm Roentgen
Roentgen ray (x-ray) (1865)
Physics Nobel 1901

August Hagenbach-Aman
(Leipzig, 1894)

Stueckelberg diagrams
(akin to **Feynman diagrams**)

Karl F. Braun
Development of
wireless telegraphy
Physics Nobel 1909

Philipp E.A. Lenard
Investigation of cathode rays
Physics Nobel 1905

Eugen von Lommel
(Zurich, 1865)

Hans Spemann
Discovery of the
organizer effect in
embryonic development
Physiology & Medicine Nobel 1935

Peter Pringsheim
(Munich, 1906)

Czerny-Turner
optical arrangement
(1930)

Rudolf Ladenburg
(Munich, 1906)

Hans Kopfermann
(Goettingen, 1925)

Wolfgang Paul
Development of ion trap
technique
Physics Nobel 1989

Andreas Steudel
(Heidelberg, 1952)

Herbert Walther
(Heidelberg, 1962)

Wolfgang Ketterle
Bose-Einstein condensation in dilute gases
of alkali atoms **Physics Nobel 2001**

Leonid I. Mandelstam
(Strasbourg, 1902)

Igor Y. Tamm
Discovery of Cherenkov
effect (1934)
Physics Nobel 1958

Max W.F. Dieckmann
(Strasbourg, 1907)

Max Knoll
(TH Munich, 1924)

Ernst Ruska
Investigation of electron optics;
Design of first electron microscope (1969)
Physics Nobel 1986

Johannes Stark
Stark-Einstein law
of photochemical
equivalence (1912)
Stark effect (1913)
Discovery of Doppler
effect in canal rays;
splitting of spectral
lines in electric fields
Physics Nobel 1919