KLEIN TREE #3

© Dr. John Andraos, 2002

Julius Pluecker
(Marburg, 1824)
discovery of magnetic properties of crystals **(1858)**
discovery of cathode rays and
spectra of gases **(1859 - 1862)**

Johann Wilhelm Hittorf
(Berlin, 1846)
concept of transport numbers for
cations and anions **(1853)**
discovery of cathode rays and
spectra of gases **(1869)**

Klein bottle

Carl L.F. Lindemann
(Erlangen, 1873)
proof that pi is a transcendental number **(1882)**

Beer-Lambert-Bouguer
law **(1729, 1760, 1852)**

Sommerfeld model of the atom **(1916)**

Debye-Huckel law **(1923)**
Debye T^3 law, **Debye** temperature **(1912)**
Debye equation for polarization
investigations of dipole moments;
electron and X-ray diffraction of gases
Chemistry Nobel 1936

Hans Albrecht Bethe
theory of nuclear reactions;
energy production in stars
Physics Nobel 1967

Richard E. Marshak
(Cornell, 1939)

Leon Charles van Hove
(U. Libre Bruxelles, 1946; Rochester)

Martinus J.G. Veltman
Geraldus 'T. Hooft
Elucidation of quantum structure
of electroweak interactions
Physics Nobel 1999

Paul H. Scherrer
(Goettingen, 1916)

Heini Granicher
(ETH, 1950s)

Karl A. Mueller
J. Georg Bednorz
Discovery of superconductivity
in ceramic materials
Physics Nobel 1987

Onsager limiting law **(1926)**
Onsager reciprocal
relations **(1931)**
Kirkwood-Onsager
equations **(1934/1936)**
thermodynamic theory of
irreversible processes
Chemistry Nobel 1968

Hueckel 4n + 2 rule
Hueckel 4n rule
(1931/1932)