

**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**)

**Baeyer-Villiger** oxidation (**1899**);  
 synthesis of indigo (**1878**);  
 triphenylmethane dyes (**1903**)  
**Chemistry Nobel 1905**

## EMIL FISCHER TREE

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**William H. Stein**  
 (Columbia, 1937)  
 structure of ribonuclease  
**Chemistry Nobel 1972**

**Bergmann-Zervas**  
 carbobenzoxy method  
**(1932)**

Fischer indole synthesis (**1883**)  
 Fischer projection (**1891**)  
**Kiliani-Fischer** synthesis (**1885/1889**)  
 Fischer esterification (**1895**), protein peptide structure (**1901**)  
 carbohydrate chemistry; purine chemistry  
**Chemistry Nobel 1902**

**Paal-Knorr** pyrrole  
 synthesis (**1885**)

**Burkhardt Helferich**  
 tetrahedral intermediate (**1930**)

**Robert F. Pschorr**  
 (Jena, 1894)

{ Bredereck reagent  
**(1968)**  
 Stetter reaction  
**(1976)**

**Fritz Pregl**  
 (Graz, MD 1894; Berlin)  
 Development of  
 microanalysis methods  
**Chemistry Nobel 1923**

magic or superacid (**1968**)  
**Olah's reagent (1973)**  
 Investigation of carbocations,  
 new uses of hydrocarbons in  
 petroleum industry, cage molecules  
**Chemistry Nobel 1994**

**Piloty's acid**  
**(1896)**

Houben-  
 Hoesch reaction  
**(1915/1926)**

**Rudolf J. Anderson**  
 (Berlin, 1911)

Diels-Alder  
 reaction (**1928**)  
**Chemistry Nobel 1950**

Helmut Scheibler  
 (Berlin, 1909)

Wanzlich  
 equilibrium  
**(1960)**

Schlenk tube  
 Schlenk equilibrium  
**(1929)**

Ruff-Fenton  
 degradation  
**(1893/1898)**

Newman projection  
**(1955)**

{ Rosenmund  
 reduction (**1918**)  
 Alder rule (**1960**)

Feigl spot tests (**1958**)

Emil Abderhalden  
 (Basel, MD 1900)

{ Taft equation (**1952**)  
 Kamlet-Taft solvent  
 parameters (**1976**)

Karl Landsteiner  
 (Vienna, MD 1891; Wuerzburg)  
 Discovery of blood groups (**1920s**)  
**Physiology & Medicine Prize 1930**

Herman F. Mark  
 (Vienna, 1920)  
 x-ray structures of

hexamethylenetetramine  
**(1923)**, graphite (**1924**),  
 oxalic acid (**1924**),  
 calomel (**1926**), solid  
 CO<sub>2</sub> (**1925 - 6**), ethane  
 and borane (**1925**), cellulose  
**(1928)**, organic compounds (**1930**),  
 polymer structures (**1930s**), first electron diffraction  
 studies of gases, determination of bond  
 lengths and angles (**1930s**)

Heyns catalyst (**1947**)

Walborsky reagent  
**(1969)**



Alfred Stock  
 (Berlin, 1899)  
 Discovery of boranes (**1913**)  
 Discovery of silanes (**1916**)  
 high vacuum technique (**1916**)  
 Discovery of borazine (**1931**)

← Zemplen's saponification (**1924**)  
 Zemplen degradation of sugars (**1926**)