# GENEALOGY DATABASE ENTRY



Wittig, Georg Friedrich Karl 1897 - 1987

DEGREE: PhD DATE: 1923 PLACE: Marburg
TEACHER/RESEARCH ADVISOR: Auwers

Nobel Prize in 1979 for the application of phosphorus-carbon ylid and zwitterionic reagents in organic synthesis, the prototypical example being $Ph_3P^+$-$CH_2^-$, which converts a carbonyl compound into an olefin; studied the reactions of ozonides, the utilization of diketones to prepare biradicals, the influence of the spatial separation of the radical centers on biradical formation or covalent ring formation, the transition-metal promoted coupling of *o*-dilithiobenzene and 2,2'-dilithiobiphenyl for the formation of unusual hydrocarbon rings, and the role of radicals in auto-oxidation and chain-radical polymerization; co-discovered (with Gilman) the halogen-lithium exchange reaction and that lithiation can occur at an unactivated C-H bond; discovered the Wittig ether rearrangement, in which phenyllithium reacts with ethers to yield alkoxides; discovered the α-elimination of an α-substituted alkyllithium to generate divalent carbon, and the β-elimination on an *ortho*-lithiated haloarene to form an aryne; analyzed the effects of electron donors and acceptors on reaction rates in organometallic chemistry.

1. *J. Organomet. Chem.* **1988**, *356*, 271-283.
2. *J. Chem. Ed.* **1954**, *31*, 357-358.
3. *Les Prix Nobel en 1979*; P. A. Norstedt & Soener: 1979; p155-156.
4. *Nobel Laureates in Chemistry 1901-1992*; James, L. K., Ed.; American Chemical Society: 1993; p611-617.
5. *Nature* **1979**, *282*, 231-232.
6. *Science* **1980**, *207*, 42-44.
7. *Acc. Chem. Res.* **1974**, *7*, 6-14.