

# GENEALOGY DATABASE ENTRY

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Rice, Francis Owen

1890 - 1989

DEGREE: DSc

DATE: 1916

PLACE: Liverpool

TEACHER/RESEARCH ADVISOR: Baly

expert on free radical reactions; proposed that many organic reactions proceed through the intermediate formation of free radicals; developed a theory that included the role of reaction vessel surfaces in free radical mechanisms; proposed mechanisms which permitted quantitative calculations of the products formed in the pyrogenic decomposition of organic compounds; pioneer in the use of deuterium cross-over studies to determine reaction mechanisms; introduced the use of liquid nitrogen cold fingers to condense the hot effluent stream from a pyrolysis reaction; discovered three previously unknown allotropic forms of sulfur; investigated the chemistry of outer space and proposed an explanation of the colors of Jupiter.

1. *Chem. Eng. News* **1989**, 67(22), 62.
2. *Catholic Univ. Bull.* **1938**, Aug., 9, 12.
3. *Capitol Chemist* **1957**, 7(33), 74-75.
4. See *J. Am. Chem. Soc.* **1920**, 42, 727-735 for confirmation of thesis advisor.