

GENEALOGY DATABASE ENTRY

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Rideal, Eric Keightley

1890 - 1974

DEGREE: PhD

DATE: 1912

PLACE: Bonn

TEACHER/RESEARCH ADVISOR: Anschütz

studied the kinetics of capillary action; showed that the growth of microorganisms could be inhibited by attaching to them a lipid-soluble molecule with heavy sidechains; demonstrated that evaporation from a water surface could be retarded by as much as 50% by covering the surface with a monolayer of long-chain fatty acids; studied specific ion interactions with colloids; measured the rigidity of monomolecular layers - the beginning of quantitative surface rheology; investigated how surface potentials could be used to follow the kinetics of chemical reactions taking place on a surface film; one of the first to utilize deuterium in kinetic studies; discovered the Rideal mechanism for catalytic surface chemistry, in which a molecule in a second van der Waals layer reacts with a chemisorbed atom immediately beneath it; developed theory for titration of proteins that was useful for understanding the dyeing of fabrics; developed catalysts for the selective oxidation of CO to CO₂ without taking H₂ to H₂O.

1. *Biog. Mem. Fell. Roy. Soc.* **1976**, 22, 381-413.
2. *Dictionary of Scientific Biography*; Charles Scribner's Sons: 1970-1990; vol. 18, p738-743.
3. *Chem. Ind.* **1975**, 800-806 and 806-813.
4. Campbell, W. A.; Greenwood, N. N. *Contemporary British Chemists*; Taylor & Francis: 1971; p191-192.