

GENEALOGY DATABASE ENTRY

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Lucas, Howard Johnson

1885 - 1963

DEGREE: MA

DATE: 1908

PLACE: Ohio State

TEACHER/RESEARCH ADVISOR: McPherson

one of first to apply Lewis' electronic theory to organic reaction mechanisms; first kinetic study of acid catalyzed hydration of an olefin; discovered the Lucas reagent (HCl/ZnCl_2) for the analysis of alcohols; first to recognize the relationship between acidity of para-substituted benzoic acids and other electronic properties; first proof of existence of halonium ions and their stereochemical consequences in substitution reactions; studied pi-complexes of olefins and acetylenes with Ag and Hg cations.

FOOTNOTE: After obtaining his MA degree with McPherson, Lucas started work toward a PhD at the University of Chicago (probably under Stieglitz). However, the death of his father in 1910 forced him to leave Chicago and he never received a PhD degree.

1. *Biog. Mem. Nat. Acad. Sci.* **1973**, 43, 162-176.
2. *Chem. Eng. News* **1953**, 31, 778.
3. *American Chemists and Chemical Engineers*; Miles, W. D., Ed.; American Chemical Society: 1976; p304-305.
4. In Fieser and Fieser's *Advanced Organic Chemistry* (1961), p146, there is a footnote stating that Lucas' MA work was with W. L. Evans. We have attempted to trace the source of this footnote and have been unsuccessful. The subject of Lucas' Masters thesis "Action of Phosphorus Trichloride Upon Organic Acids" does not correspond to Evans' interests in 1908, but also does not correspond with the subject of a joint 1909 paper by McPherson and Lucas. We have, therefore, decided to take McPherson as Lucas' advisor until such time as more definitive proof is available.
5. See footnote 7 in *J. Chem. Ed.* **1979**, 56, 93 for a discussion of Lucas' possible connection to Stieglitz.