ERNST L. QUIGLEY

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OBJECTIVE Research and development position in an industrial setting utilizing my experience in spectroscopic investigations in heterogeneous systems

HIGHLIGHTS

- Extensive experience in the investigation of photochemical reactions
- Modeling of the kinetics of heterogeneous reactions
- Industrial experience (summer intern program)

EDUCATION

- Ph.D., Physical Chemistry, University of Iowa, Iowa City, IA
 Thesis title: "Photochemical Studies of Heterogeneous Reactions in the Atmosphere" Advisor: Professor Anton Bruckner
- B.S., Chemistry (*summa cum laude*), Central College, Pella, IA Thesis title: "Computer Simulation of Ozone Reactions" Advisor: Professor J. P. Morgan

RESEARCH EXPERIENCE

- 1993 Graduate Assistant, University of Iowa. Advisor: Professor Anton Bruckner
 - Developed new, highly sensitive technique for the measurement of photochemical reactions on heterogeneous surfaces
 - Modeled the kinetics of heterogeneous photochemical atmospheric reactions
 - Experienced in all manners of optical investigations of photochemical processes
 - Teaching responsibilities included Advanced Physical Chemistry and Advanced Kinetics laboratories

Summers

- 1995/96 Summer Intern, Exxon Research and Development, Houston, TX
 - Spectroscopic studies of gas phase reactions on various heterogeneous catalysts of industrial importance
- 1993 Summer Intern, Exxon Research and Development, Houston, TX
 - Spectroscopic studies of gas phase reactions on various heterogeneous catalysts of industrial importance
- 1992/93 Undergraduate Teaching Assistant, Central College, Pella, IA

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AFFILIATIONS

American Chemical Society Optical Society of America

PUBLICATIONS

- 1. Bruckner, A., B. J. Kline, and E. Quigley, "The detection of fluorocarbon-water complexes in the atmosphere", *J. Phys. Atmospheric Sci*, **14**, 428-431, (1998).
- 2. Davis, J., E. Quigley, and A. Bruckner, "A critical review of the kinetics of heterogeneous photochemical atmospheric reactions", *Chem. Revs.* **45**, 120-145, (1997).
- 3. Quigley, E. and A. Bruckner, "A novel optical technique for the measurement of atmospheric chlorofluorocarbons", *J. Instrum. Anal.* **135**, 1214-1218, (1997).
- 4. Quigley, E. and J. P. Morgan, "Computer simulation of ozone reactions", *J. Phys. Chem.* **88**, 124-126, (1994).

REFERENCES

Professor Anton Bruckner Department of Chemistry University of Iowa Iowa City, IA 52240 (319) 845-2400 Professor J. P. Morgan Department of Chemistry Central College Pella, IA 50219 (515) 656-4369 Dr. J. R. Peach Research Laboratory Exxon Corporation Houston, TX 77017 (281) 455-2500