

1931

The Color and Intensity of the Chemiluminescence of Solid Sodium

R. M. Bowie
Iowa State College

Let us know how access to this document benefits you

Copyright ©1931 Iowa Academy of Science, Inc.

Follow this and additional works at: <https://scholarworks.uni.edu/pias>

Recommended Citation

Bowie, R. M. (1931) "The Color and Intensity of the Chemiluminescence of Solid Sodium," *Proceedings of the Iowa Academy of Science*, 38(1), 219-219.

Available at: <https://scholarworks.uni.edu/pias/vol38/iss1/69>

This Research is brought to you for free and open access by the Iowa Academy of Science at UNI ScholarWorks. It has been accepted for inclusion in Proceedings of the Iowa Academy of Science by an authorized editor of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

PHOSPHORESCENCE IN A PHOTOELECTRIC CELL OF
FUSED QUARTZ

GEORGE V. EMERY

While using a quartz spectrograph and a fused quartz photoelectric cell, a large leak was observed immediately after shutting off the exciting light. This was apparently due to a phosphorescence of the fused quartz. Only a few seconds exposure sufficed to give the saturation value. The current decreased according to the regular law of decay of phosphorescence reaching zero in about one minute.

PHYSICS LABORATORY,
IOWA STATE COLLEGE,
AMES, IOWA.

THE COLOR AND INTENSITY OF THE CHEMILUM-
INESCENCE OF SOLID SODIUM

R. M. BOWIE

The fact that solid sodium reacts with the moisture in the air to produce a faint glow has been known for years. The color of the light was said to be greenish and its intensity extremely low; however, no measurements had been made. In this article, a method is described for determining its intensity by means of a photoelectric cell. The determination of the spectrum of the light as obtained both by filters and spectrographically is described. The intensity was found to vary from 3.57 to 10.5×10^{-7} lumens per square inch of metal surface while the spectrum was found to consist of a band between 5000 A° and 5300 A° with a maximum at about 5100 A° .

PHYSICS LABORATORY,
IOWA STATE COLLEGE,
AMES, IOWA.

THE CHEMILUMINESCENCE OF SOLID SODIUM

R. M. BOWIE

Since the time of Davy, it has been known that freshly cut surfaces of sodium, when viewed in the dark, give off a faint light.

G. Rebaul, in 1910, stated that the effect was due to the formation
Published by UNI ScholarWorks, 1931