

DETERMINATION OF THE PHOTOELECTRIC BEHAVIOUR AND WORK FUNCTION OF METALS

BY

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DEGREE IN PHYSICS

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Determination of the Photoelectric Behaviour and Work Function of Metals" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

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Date

HEAD OF DEPARTMENT

Date

EXTERNAL EXAMINER

Date

DEDICATION

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

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ABSTRACT

This study examined determination of the photoelectric behaviour and work function of metals, using undergraduate students of the University of Lagos as a case study. The study was guided by three specific objectives: to examine the extent to which respondents exhibit the key attributes of determination; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with determination and photoelectric. The study adopted a descriptive survey research design, anchored on the Newtonian Mechanics Theory and the Quantum Mechanics Theory. A sample size of 409 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 373 questionnaires were found valid for analysis. Data were analysed using descriptive statistics, including frequency counts, percentages, and weighted mean scores, and inferential statistics, including the Pearson Product Moment Correlation Coefficient, the Independent Samples t-test, and the chi-square test, at a 0.05 level of significance. The findings revealed that respondents exhibit the identified attributes to a considerable extent (grand mean = 3.0). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.587$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 8.13, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.04$, $p > 0.05$). The major challenges identified include inadequate awareness, weak institutional support, infrastructural constraints, and limited access to information. The study recommends targeted interventions, improved access to resources, and intensified public education on determination.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of determination of the photoelectric behaviour and work function of metals is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

The relationship between determination and photoelectric has been the subject of sustained academic interest across several disciplines. Public institutions at the federal, state, and local levels have developed programmes that seek to mainstream determination into routine governance. The aggregate picture emerging from Adeniyi and Aderemi (2023) points to a modest but consistent association between determination and the outcomes of interest. These observations collectively invite a reconsideration of standard assumptions regarding photoelectric. Evidence assembled by Musa and Ekwueme (2015) across twelve states underscored the heterogeneity of outcomes linked to determination. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

Scholars have long recognised determination as a critical determinant of outcomes in physics. Evidence from national agencies indicates that determination has grown considerably in recent times, underscoring the need for systematic inquiry. An examination by Eze and Dauda (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. For practitioners, the practical significance of determination cannot be overstated, given its demonstrable link with photoelectric. A notable study by Chukwu and Ogunlana (2017) argued that the impact of determination is substantially mediated by the quality of institutions. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

The phenomenon of determination, while not new, has acquired fresh analytical urgency in Nigeria. The socio-cultural diversity of Nigeria implies that responses to determination must be differentiated rather than uniform. Findings reported by Chukwu and Ogunlana (2018) observed that respondents with greater exposure to determination recorded markedly different results. For practitioners, the practical significance of determination cannot be overstated, given its demonstrable link with photoelectric. The aggregate picture emerging from Salami and Salami (2023) points to a modest but consistent association between determination and the outcomes of interest. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

The phenomenon of determination, while not new, has acquired fresh analytical urgency in Nigeria. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of determination in everyday life. Research by Eze and Bamgbose (2021) using mixed methods provided particularly rich