Bibliographical Project

X-Rays and Radiography
(based on the work of Wilhem Röntgen)

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Contents

Introduction

In the introduction, we will introduce you to the historical context of X-ray discovery and the significance of Wilhelm Conrad Röntgen's work.

Basics of X-ray Physics - X-ray production

Wilhelm Conrad Roentgen | Biography, Discovery, X-Rays, & Facts | Britannica

Chapter 1

Historical Background

1.1 Radiation Understanding in the Late 19^{th} century

Here we'll talk about the scientific and technological developments preceding Röntgen's work. We will also talk about the state of physics and understanding of radiation in the late 19th century.

Chapter 2

Life and Career of Wilhelm Conrad Röntgen

2.1 Röntgen's groundbreaking experiment

First, we will do a quick biography of Wilhelm Conrad Röntgen's early life and education, his career progression and key influences. Then we will talk over how his background contributed to his groundbreaking work.
Wilhelm Conrad Röntgen: The scientist and his discovery - ScienceDirect

Chapter 3

The Discovery of X-Rays

3.1 Impact of Röntgen's X-Rays discovery

In this chapter we will reveal Röntgen's experimental setup and methodology, the moment of his discovery. Then we will show the first X-ray images, and the reaction of the public and scientific world after the discovery.

3.2 Radiography's Early Applications and Pioners

Here, we will dive thought on howRöntgen's discovery led to the development of radiography. We will also discuss about the pioneers in radiography who followed Röntgen We will finalize by talking about the early applications of radiography in medicine and industry.

Chapter 4

Advances in Radiographic Technology

4.1 Evolution of Radiography Equipment and Techniques

Here, we will talk about the evolution of radiographic equipment and techniques.

4.2 4.2 Technological Breakthroughs in Radiography

We will follow up by discussing technological breakthroughs in radiography.

4.3 4.3 Radiography During World War I and II

We will extend this chapter by talking about the impact of World War I and World War II on radiography.

Principles of radiography | Radiology Key, (radiographie)
History of Radiology: Timeline, Pioneers, Inventions | RamSoft

Chapter 5

Modern Applications of Radiography

5.1 Contemporary Uses and Challenges in Radiography

We will emphasize here the contemporary uses of radiography in medicine, industry, and other fields, along with the benefits and challenges of modern radiographic technology. Radiology in 2020: Opportunities and Challenges - HealthManagement.org

Chapter 6

Ethical and Safety Considerations in Radiography

6.1 Ethical and Safety issues in Radiography

We will talk about ethical and safety issues related to radiographic procedures
History of Radiation Regulation in Medicine - Radiation In Medicine - NCBI Bookshelf (nih.gov)
5 Imperatives for Radiation Dose Management in Medical Imaging (hbr.org)

6.2 Development of Safety Protocols and Regulations

In this chapter we will discuss the development of safety protocols and regulations, along with the importance of radiation dose management.
Radiation - Artificial Sources | Britannica (affects of radiation on body with charts)

Chapter 7

Wilhem Conrad Röntgen's Legacy

7.1 Importance of Radiation Dose Management

7.2 Lasting Impac and Legacy Röntgen

7.3 Recognition and Honors for Röntgen

In this chapter we will talk about the lasting impact of Röntgen's work on X-rays and radiography. Then we will see the recognition and honours he received, and how his legacy continues to influence the field.

Chapter 8

Future Trends in Radiography

8.1 Future advancements in Radiography

8.2 Emerging Technologies and AI in Radiography

Here we will discuss and argue about the potential advancements and innovations in radiography. The emerging technologies and applications in the field, and the role and influence that of artificial intelligence could have inradiography. Artificial intelligence in radiography: Where are we now and what does the future hold? - ScienceDirect

Chapter 9

Conclusion

- Summarize the key findings and contributions discussed in the essay. - Reflect on the enduring significance of Wilhelm Conrad Röntgen's work. - Discuss the ongoing and future relevance of radiography in various fields.

References

- List all the sources used in your research and writing, following a specific citation style (e.g., APA, MLA).

A real references numerotation system will be implemented, the use of LaTeX is really powerful for that. At the moment we only have link included in each section. We are aware of the necessity to have exhaustive and clear references for our work.

Link: Rayons X, produit de contraste... Quels sont les risques du scanner ? | Santé Magazine (santemagazine.fr)
Link: Basics of X-ray Physics - X-ray production (radiologymasterclass.co.uk)
Link: Radiation - Artificial Sources | Britannica
Link: Principles of radiography | Radiology Key, (radiographie)
Link: History of Radiology: Timeline, Pioneers, Inventions | RamSoft
Link: Radiology in 2020: Opportunities and Challenges - HealthManagement.org
Link: Ethical Issues in Diagnostic Radiology | Journal of Ethics | American Medical Asnkciation (ama-assn.org)
Link: History of Radiation Regulation in Medicine - Radiation In Medicine - NCBI Bookshelf (nih.gov)
Link: 5 Imperatives for Radiation Dose Management in Medical Imaging - SPONSOR CONTENT FROM SIEMENS HEALTHINEERS (hbr.org)
Link: Artificial intelligence in radiography: Where are we now and what does the future hold? - ScienceDirect
Link: Wilhelm Conrad Röntgen: The scientist and his discovery - ScienceDirect
Link: Ethical Issues in Diagnostic Radiology | Journal of Ethics | American Medical Association (ama-assn.org)

appendix

- Include supplementary materials, such as additional images, charts, or data.

General Remarks

Ensure thorough research and critical analysis throughout the essay. Maintain proper citation and adhere to the chosen citation style guidelines. Ensure a logical flow and coherence in the essay as you transition between chapters and sections.