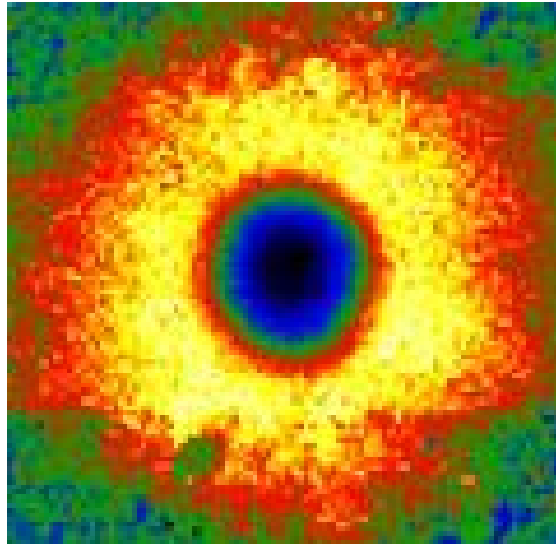


# **21st IUVSTA Summer School on Physics at Nanoscale**



## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

# **Photovoltaics: Its role in the future energy system and its main challenges**

*Monday, 3 June 2024 14:20 (50 minutes)*

**Presenter:** GORDON, Ivan

**Session Classification:** Lectures

**Track Classification:** Topics: Photovoltaics

Contribution ID: 2

Type: **not specified**

## **Semiconductors for modern electronic devices**

*Monday, 3 June 2024 16:30 (50 minutes)*

**Presenter:** KOSTELNÍK, Petr

**Session Classification:** Lectures

**Track Classification:** Topics: Electronics

Contribution ID: 3

Type: **not specified**

## Advanced Solar Cells

*Tuesday, 4 June 2024 10:30 (50 minutes)*

**Presenter:** KOPECEK, Radovan

**Session Classification:** Lectures

**Track Classification:** Topics: Photovoltaics

Contribution ID: 4

Type: **not specified**

## Nanophotonics

*Monday, 3 June 2024 17:20 (50 minutes)*

**Presenter:** MARTIN, Olivier

**Session Classification:** Lectures

**Track Classification:** Topics: Optoelectronics and nanophotonics

Contribution ID: 6

Type: **not specified**

## Functional optoelectronic thin films

*Monday, 3 June 2024 15:40 (50 minutes)*

**Presenter:** MORALES MASIS, Monica (University of Twente)

**Session Classification:** Lectures

**Track Classification:** Topics: Optoelectronics and nanophotonics

Contribution ID: 7

Type: **not specified**

## Exploring non-standard analytical techniques for power semiconductors

*Tuesday, 4 June 2024 15:00 (50 minutes)*

Since the advent of microelectronics and semiconductor manufacturing, the so called “Failure Analysis” has always been an essential tool in its development. Many analytical techniques owe their success partly also to their widespread use in this billion-euro industry. When it comes to power semiconductors, however, the particular combination of brittle and ductile, thick and thin layers of materials, together with a challenging application landscape, require the use of less known techniques for the analysis of materials and materials’ degradation. I will give some insights into non-standard analytical techniques which cannot be used “off the shelf”, and often require additional research together with academic partners before they become useful tools for power semiconductor development and reliability assessment.

**Presenter:** NELHIEBEL, Michael (Kompetenzzentrum Automobil & Industrie (KAI) GmbH / Infineon Technologies Austria AG)

**Session Classification:** Lectures

**Track Classification:** Topics: Electronics

Contribution ID: 8

Type: **not specified**

## Photovoltaic production in Europe

*Thursday, 6 June 2024 09:20 (50 minutes)*

**Presenter:** NOGAY, Gizem (Meyer Burger Research)

**Session Classification:** Lectures

**Track Classification:** Topics: Photovoltaics



Contribution ID: 9

Type: **not specified**

## **Metal oxide surfaces**

*Thursday, 6 June 2024 15:00 (50 minutes)*

**Presenter:** PARKINSON, Gareth

**Session Classification:** Lectures

**Track Classification:** Topics: Electronics

Contribution ID: 10

Type: **not specified**

## **Light element analysis in energy materials by ion beams**

*Tuesday, 4 June 2024 12:10 (50 minutes)*

**Presenter:** PRIMETZHOFER, Daniel (Uppsala University)

**Session Classification:** Lectures

**Track Classification:** Topics: Optoelectronics and nanophotonics

Contribution ID: 11

Type: **not specified**

## **Bionanosciences**

*Wednesday, 5 June 2024 11:30 (50 minutes)*

**Presenter:** REIMHULT, Erik (University of Natural Resources and Life Sciences, Vienna)

**Session Classification:** Lectures

**Track Classification:** Topics: Bionanosciences

Contribution ID: 12

Type: **not specified**

# Physics at the frontiers of information technology

*Monday, 3 June 2024 13:30 (50 minutes)*

**Presenter:** RIEL, Heike (IBM Research Quantum Europe)

**Session Classification:** Lectures

**Track Classification:** Topics: Electronics

Contribution ID: 13

Type: **not specified**

## **Photovoltaics: Its role in the future energy system and its main challenges 2**

*Tuesday, 4 June 2024 09:20 (50 minutes)*

**Presenter:** GORDON, Ivan

**Session Classification:** Lectures

**Track Classification:** Topics: Photovoltaics

Contribution ID: 14

Type: **not specified**

## **Semiconductors for modern electronic devices 2**

*Tuesday, 4 June 2024 15:50 (50 minutes)*

**Presenter:** KOSTELNÍK, Petr

**Session Classification:** Lectures

**Track Classification:** Topics: Electronics

Contribution ID: 15

Type: **not specified**

## Advanced Solar Cells 2

*Wednesday, 5 June 2024 08:30 (50 minutes)*

**Presenter:** KOPECEK, Radovan

**Session Classification:** Lectures

**Track Classification:** Topics: Photovoltaics

Contribution ID: 16

Type: **not specified**

## Nanophotonics 2

*Tuesday, 4 June 2024 17:00 (50 minutes)*

**Presenter:** MARTIN, Olivier

**Session Classification:** Lectures

**Track Classification:** Topics: Electronics



Contribution ID: 17

Type: **not specified**

## Functional optoelectronic thin films 2

*Tuesday, 4 June 2024 11:20 (50 minutes)*

**Presenter:** MORALES MASIS, Monica (University of Twente)

**Session Classification:** Lectures

**Track Classification:** Topics: Optoelectronics and nanophotonics

Contribution ID: 18

Type: **not specified**

## Principal reliability at automotive industry 2

*Wednesday, 5 June 2024 10:40 (50 minutes)*

**Presenter:** NELHIEBEL, Michael (Kompetenzzentrum Automobil & Industrie (KAI) GmbH / Infineon Technologies Austria AG)

**Session Classification:** Lectures

**Track Classification:** Topics: Electronics

Contribution ID: 19

Type: **not specified**

# Photovoltaic production in Europe 1

*Wednesday, 5 June 2024 09:20 (50 minutes)*

**Presenter:** NOGAY, Gizem (Meyer Burger Research)

**Session Classification:** Lectures

**Track Classification:** Topics: Photovoltaics

Contribution ID: 21

Type: **not specified**

## **Metal oxide surfaces 2**

*Thursday, 6 June 2024 18:00 (50 minutes)*

**Presenter:** PARKINSON, Gareth

**Session Classification:** Lectures

**Track Classification:** Topics: Optoelectronics and nanophotonics

Contribution ID: 22

Type: **not specified**

## **KeV beams in materials science - some fundamentals and novel applications 2**

*Tuesday, 4 June 2024 17:50 (50 minutes)*

**Presenter:** PRIMETZHOFER, Daniel (Uppsala University)

**Session Classification:** Lectures

**Track Classification:** Topics: Optoelectronics and nanophotonics

Contribution ID: 23

Type: **not specified**

## **Bionanosciences 2**

*Thursday, 6 June 2024 08:30 (50 minutes)*

**Presenter:** REIMHULT, Erik (University of Natural Resources and Life Sciences, Vienna)

**Session Classification:** Lectures

**Track Classification:** Topics: Bionanosciences

Contribution ID: 24

Type: **not specified**

## Physics at the frontiers of information technology 2

*Tuesday, 4 June 2024 08:30 (50 minutes)*

**Presenter:** RIEL, Heike (IBM Research Quantum Europe)

**Session Classification:** Lectures

**Track Classification:** Topics: Electronics

Contribution ID: 25

Type: **not specified**

## Spintronics

*Thursday, 6 June 2024 15:50 (50 minutes)*

**Presenter:** TBD

**Session Classification:** Lectures

**Track Classification:** Topics: Magnetism, spintronics and quantum technologies



Contribution ID: 27

Type: **not specified**

## Spintronics 2

*Thursday, 6 June 2024 17:10 (50 minutes)*

**Presenter:** TBD

**Session Classification:** Lectures

**Track Classification:** Topics: Magnetism, spintronics and quantum technologies