

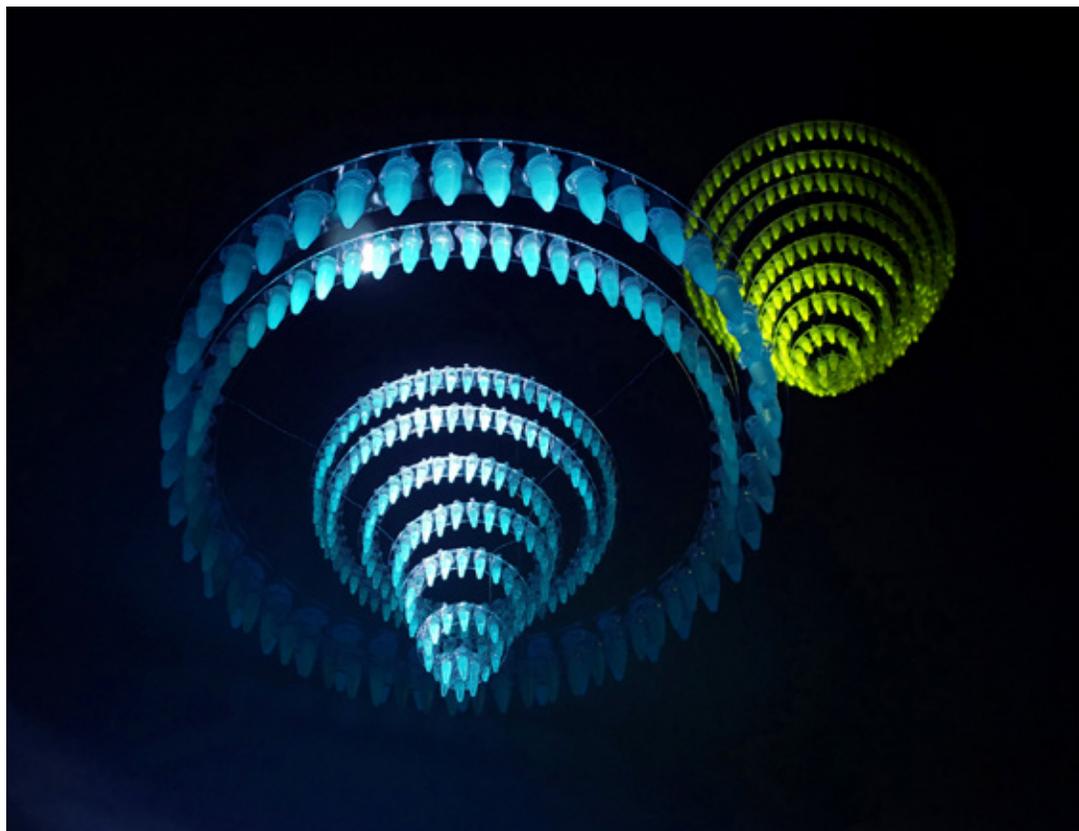
FROM THE EDITORS

WHAT IS THE USE OF SCIENCE, THE USE OF ART?

Society treats both realms as useful, applied fields, but that is not necessarily the case. The nineteenth-century English mathematician George Boole is known primarily as the creator of two-valued algebra. What prompted him to develop concepts that were completely useless in his day? He could never have foreseen that he was laying the foundation for binary logic, nowadays used in every single computer.

What is the difference between a painting and a scientific discovery? As the artist Adam Wsiołkowski puts it, a scientist discovers existing entities, while a painter as if resurrects entities out of non-existence. Science and art need to pay more heed to one another, to be sure. For instance, such a lack of artistic sensitivity on the part of architects and town planners led us to pave over city squares and deprive them of greenery and water, so that now they need to be revitalized. But what is the difference between science and art, and what do they have in common? It is into these and similar questions that we delve in this issue of *Academia* magazine.

PROF. KATARZYNA TURNAU
 PROF. JERZY DUSZYŃSKI

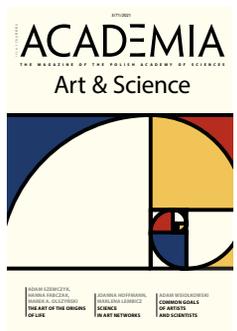


MAGDA JUREK

Jellyfish chandeliers

Bioluminescence is the ability of living organisms to emit light without producing heat. The GFP protein, discovered to be responsible for bioluminescence in jellyfish, has been harnessed in futuristic projects, such as genetic modification of trees to light up cities. GFP is also used as a marker in genetics research and medicine. This art installation at the "Przemiany" Festival at the Copernicus Science Center was made of thousands of tubes that form biomorphic forms. A green fluorescent protein was used to create a glowing effect. The experiment shows the amazing potential of nature.

Author: **Magda Jurek** (panijurek.pl), in collaboration with **Stanisław Łoboziak**



THE MAGAZINE
 OF THE POLISH
 ACADEMY
 OF SCIENCES

No 3/71/2021
 Quarterly
 ISSN 17338662
 900 copies printed

© Polska Akademia Nauk

Polish Academy
 of Sciences,
 Office for Popularizing
 and Promoting Science
 PKiN, pl. Defilad 1
 00-901 Warsaw, Poland

www.pan.pl
 www.academia.pan.pl
 academia@pan.pl

EDITORIAL STAFF

Ilona Siwak
 Editor-in-Chief

Jolanta Iwańczuk
 Earth Sciences

Marcin Pietras
 Biological & Agricultural
 Sciences

Justyna Orłowska
 Journalist

Daniel Sax
 Editor,
 English-Language Version

Andrzej Figatowski
 Graphic Designer

**DG ART Agnieszka
 Deluga-Góra**
 Photo editing

SCIENTIFIC COUNCIL

Jerzy Duszyński
 President of the Polish
 Academy of Sciences
 (Chairman)

Stanisław Filipowicz
Roman Słowiński
Grażyna Borkowska
Katarzyna Turnau
Roman Micnas
Witold Rużyło
Antoni Rogalski
Henryk Szymczak

Translation by
 Sax Translations

Printed by
 Agencja Wydawniczo-
 Poligraficzna Gimpo