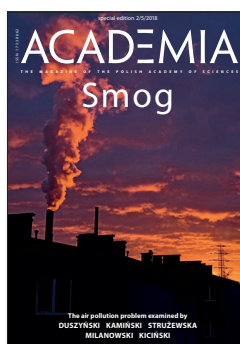




## Table of Contents

<b>Assoc. Prof. Jacek Wojciech Kamiński</b> <b>Asst. Prof. Joanna Strużewska</b>	SEEING GRAY .....	4
<b>Prof. Janusz Milanowski</b>	HUMAN SENSITIVITY .....	10
<b>Prof. Jan Kiciński</b>	FROM NUISANCE TO TECHNOLOGICAL SPECIALTY .....	14
<b>In the Lens</b>	NEW ENERGY .....	18



The Magazine  
of the Polish Academy  
of Sciences  
special edition 2/5/2017  
ISSN 1733-8662  
2100 copies printed

#### PUBLISHER:

© Polish Academy of Sciences

Office for Popularizing  
and Promoting Science

pl. Defilad 1,  
00-901 Warsaw, Poland

e-mail: [academia@pan.pl](mailto:academia@pan.pl)  
[academia.prenumerata@pan.pl](mailto:academia.prenumerata@pan.pl)

[www.scienceonline.pl](http://www.scienceonline.pl)

#### EDITORIAL STAFF:

**Jan Strelau**  
Honorary Editor-in-Chief  
**Anna Zawadzka**  
Editor-in-Chief  
& Humanities  
**Katarzyna Czarnecka**  
Deputy Editor  
& Managing Editor  
**Agnieszka Kloch**  
Biomedical Sciences  
**Agnieszka Pollo**  
Exact Sciences

**Jolanta Iwańczuk**  
Earth Sciences  
**Daniel Sax**  
Editor,  
English-Language Version  
**Andrzej Figatowski**  
Layout design  
**Andrzej Kozak**  
Photo editing  
**D. Sax, C. Stupnicka,**  
**A. Król**  
Translation

#### SCIENTIFIC COUNCIL:

**Jerzy Duszyński**  
Chairman  
**Edward Nęcka**  
**Grażyna Borkowska**  
**Leszek Kaczmarek**  
**Roman Micnas**  
**Lucjan Pawłowski**  
**Witold Rużyłło**  
**Henryk Szymczak**  
Printed by Agencja  
Wydawniczo-Poligraficzna  
GIMPO



NEUPADDY/WWW.PIXABAY.COM



A. POWAŁOWSKA

## Where to start

The special bilingual issues that *Academia* magazine publishes from time to time, such as the one you are holding in your hands, offer a platform by which scholars of the Polish Academy of Sciences present opinions and position statements on pressing topics that attract broad societal interest. Previous special issues have addressed human migrations, vaccinations, polar research, and the Białowieża Primeval Forest. This special issue is devoted to the cumbersome problem of smog.

The phenomenon of smog is here examined from the standpoint of four outstanding experts:

- a professor of medicine, whose research interests revolve around allergic disorders of the respiratory system, the respiratory impact of airborne dust particles, and lung cancer,
- a geophysicist and an engineer, who describe the characteristics of dust particles, their occurrence in the atmosphere, and how Poland's smog problem compares to that of other European countries,
- an outstanding specialist dealing with eco-energy, distributed power generation and environmental protection technologies.

The authors of the texts herein therefore differ widely in terms of the fields of expertise and their professional backgrounds. Something they all share, however, is a conviction that smog is dangerous and exerts a major impact on our economy and health. One thing is certain: the excessive air pollution problem in many parts of Poland absolutely must be reduced. Efforts in this direction will presumably spark many conflicts and dilemmas. But first the phenomenon of smog needs to be understood thoroughly and properly. It is this objective that this special issue of *Academia* magazine aims to serve.

**PROF. JERZY DUSZYŃSKI,**  
*PRESIDENT OF THE POLISH ACADEMY OF SCIENCES*