www.czasopisma.pan.pl



# 1/57/2018

#### Focus on

- 4 ALEKSANDRA BILEWICZ Cooperativism A Dream Forgotten
- 11 AGATA GĄSIOROWSKA Finance Money to Burn, But No Change to Spare
- 16 JUSTYNA CYBULSKA Food Technology Demystifying Those E Numbers
- 20 ZOFIA BONI Food Anthropology The Trouble with Sweet Buns
- 23 AGNIESZKA KLOCH Nutrition The Benefits of Self-Restraint
- 26 AGNIESZKA SIRKO Biology Preparing for Death

### Research in Progress

- **30** ŁUKASZ PIĄTKOWSKI Technology Capturing the Invisible
- 35 JAN GOLONKA Paleogeography The Birth and Death of a Big Pond
- 38 KRZYSZTOF OWOCKI Paleobiology The Scoop on Fossil Feces
- 42 ZOFIA SZWEDA-LEWANDOWSKA Demographics Trapped Inside a Double Cheeseburger
- **46** NAOMI MANDEL Polish Institute of Advanced Studies (PIASt) Truth as a Reflection of Fiction

### Briefly Speaking

**50** NATALIA and PIOTR TRZONKOWSCY Playing Cops vs. Outlaws

#### Insight

- 58 JAN MARCIN WĘSŁAWSKI Ecology Wise up or Die Out
- 62 ROBERT NIEDŹWIEDZKI Palaeontology The Benefits of Playing With Rocks
- 68 IN THE LENS: The Land of Smell, Taste, and Touch

#### Short circuit

74 WŁODZIMIERZ ZAWADZKI Foundlings



### Focus on Cooperativism

A Dream Forgotten The story of Poland's Społem co-ops, told by Aleksandra Bilewicz from Warsaw University. **4** 



### Research in Progress

**Capturing the Invisible** Catching a bursting balloon in the act: ultrafast photography explained by Łukasz Piątkowski, PAS Institute of Physical Chemistry. **30** 



## Briefly Speaking

**Cops vs. Outlaws** Natalia Marek-Trzonkowska and Piotr Trzonkowski from the Medical University of Gdańsk describe their joint research work and private lives together **50** 

COVER PHOTO: JAKUB OSTAŁOWSKI PAGE 2: CENTRAL ARCHIVES OF MODERN RECORDS/SPOŁEM ARCHIVES, ŁUKASZ PIĄTKOWSKI, JAKUB OSTAŁOWSKI

2





FROM THE EDITORS

# What IF WE SIMPLY HAD LESS?

*onsumption*, the dictionary tells us, refers to using up, eating or expending a resource. The days when we consumed only what we absolutely needed to survive are long a thing of the past. Today many people want to have as much as possible of everything – irrespective of whether they actually need it or not.

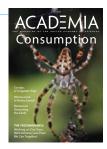
The most popular argument cited against this accusation is that today's manufacturers fill the market with so many attractive products that people no longer really know what their actual needs are. Especially since possessions are now an exponent of social status. And instead of putting money away for our old age, we prefer to spend it on another object. If it actually serves a purpose and is durable, perhaps that makes some kind of sense. But all too often, it frequently swiftly reverts to what it truly was from the very beginning: just another useless thing.

The Earth's resources are swiftly being consumed by our civilization, to produce objects and foodstuffs whose usefulness is at the very least debatable. Scientists have been warning for a long time that the planet is becoming increasingly barren, while at the same time – no matter how exiting our futuristic visions may be – we really do not have anywhere else to go. It therefore seems that if humanity does not come to grasp the meaning of the word "moderation," it will sooner or later most likely become a perfect consumer in the purest sense: eating up everything, even itself.



#### Mariusz Dydo (born 1979, Tarnów)

Graduated from the Sculpture Department of the Fine Arts Academy in Kraków, under Jerzy Nowakowski. In 2013 he created the project Dydodecor, meant to promote sculpture based on the traditions and technologies of porcelain manufacturing. In 2014 he won his first prize for the design of his installation "*Ułóż sobie WOLNOŚĆ*" [Arrange Your FREEDOM]. In 2015 he won first place for the spatial form "*Słodka jak cukierek*" [Sweet as Candy] in the international competition Crossroads of Freedom. His work gravitates between classical stylistics and pop culture.



#### THE MAGAZINE OF THE POLISH ACADEMY OF SCIENCES

No. 1/57/2018 Quarterly ISSN 17338662 900 copies printed © Polska Akademia Nauk 2016 Polish Academy of Sciences, Office for Popularizing and Promoting Science PKiN, pl. Defilad 1, 00-901 Warsaw, Poland academia@pan.pl www.academia.pan.pl www.scienceonline.pl Subscription: academia.prenumerata @pan.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 Mathematics, Physics, Chemistry, Technology Jolanta Iwańczuk Earth Sciences Daniel Sax Editor, English-Language Version Andrzej Figatowski Graphic Designer

#### SCIENTIFIC COUNCIL

Jerzy Duszyński President of the Polish Academy of Sciences (Chairman) Edward Nęcka Grażyna Borkowska Leszek Kaczmarek Roman Micnas Lucjan Pawłowski Witold Rużyłło Henryk Szymczak

MARCIN KONIAK/DESA UNICUM

3

Translation by D. Sax, C. Stupnicka, A. Król

Printed by Agencja Wydawniczo--Poligraficzna Gimpo