

## BIOLOGY

**BELGIUM | Biology-11**

Ihssane Azzam  
Marylen Sun  
Florence Bridoux  
How butterfly flies ?

**CHINA | Biology-05**

Letian Xiao  
Primary Study on Discoloration of Stalactites in Hu-Tian Palace

**DENMARK | Biology-08**

Frederikke Uldahl Martensen  
Correlation between acne treatment and the development of tetracycline resistance

**ESTONIA | Biology-06**

Maris Sala  
Inhibiting the replication of Chikungunya virus replicon particles with antiviral agents, and a traditional herbal tincture Carmol Drops

**FINLAND | Biology-03**

Mei Xu  
Investigating the Effect of Green Tea on the Growth of Pro-biotic Bacteria Combination

**ITALY | Biology-01**

Sofia Onorato  
Daniel Vasilica Copil  
Natural antimicrobial extracted from medicinal plants

**LITHUANIA | Biology-02**

Modestas Gudauskas  
Acetobacter spp. bacteria producing biopolymers simultaneously

**PORTUGAL | Biology-10**

Vasco Gabriel Vaz Pereira  
Carlota Oliveira Andrade  
When memory flies away

**RUSSIA | BIOLOGY-07**

Irina Semenovna Troeva  
Fauna and ecology of bats in central Yakutia (North-Eastern Siberia, Russia)

**SLOVENIA | Biology-13**

Ana Halužan Vasle  
Ana Milovanović  
Designing Synthetic Gene Regulatory Networks

**TURKEY | Biology-14**

Doruk Tatlıdil  
Faruk Erin  
Preparation of Chitosan Coated Resveratrol-Magnetic Beads for Magnetic Target

**USA | Biology-12**

River Connell Grace  
Shining a Light on the Blind: Evolutionary Regression and Adaptive Progression in the Micro-vertebrate *Ramphotyphlops braminus*, a Model for Understanding Brain Organization and Complex Neurological Disorders

## CHEMISTRY

**AUSTRIA | Chemistry-08**

Simon Marxgut  
Elias Vigl  
Simon Hofer  
RElectronics

**CANADA | Chemistry-02**

Katherine Renee Teeter  
Synthetic Limpet Teeth for Improved Joint Performance

**CZECH REPUBLIC | Chemistry-04**

Petra Kmoníčková  
Jiří Etrych  
Chalcogenide glasses and films Ga5Sb10Ge20S65:0.1Ho0.1Er with intense luminescence in IR spectral region

**EGYPT | Chemistry-03**

Nour Darwish  
Ahmed Kassem  
H<sub>2</sub>O<sub>2</sub> future fuel

**ESTONIA**

**Chemistry-05**

Anton Konovalov  
Synthesis of Haspin-Selective High-Affinity Fluorescent Probe

**EUROPEAN SCHOOLS**

**Chemistry-07**

Adam Andor Urmos  
Multifunctional application of natural sensor arrays

**GERMANY**

**Chemistry-10**

Friedrich Wanierke  
Paul Rathke  
Christian Schärf  
Alpha-aluminium oxide-based gemstones: Development of a chemical synthesis process prompted by current mining conditions

**PORTUGAL**

**Chemistry-09**

Nelya Kril  
Margarida Ribeiro de Sousa, Henrique Miguel da Rocha Gonçalves  
Determination of bioavailable calcium in eggshell

**SLOVAKIA | Chemistry-06**

Dominik Aschengeschwandtner  
Balint Cziferi  
Application of Direct Conductometry for Determination of Alkylamines in Production of Chemicals in Rubber Industry

**UNITED KINGDOM | Chemistry-01**

Sahar Roxanne El-Hady  
How extreme was climate change in South Wales at the end of the last glacial period?

**USA | Chemistry-11**

Rajeev Ranjan Jha  
Biochemical Characterization and Imaging of Arc: Insights into Neurodegeneration and Alzheimer’s Development

## COMPUTING

**BELARUS | Computing-01**

Uladzislau Hadalau  
Geneces - Cloud EcoSystem

**BULGARIA | Computing-06**

Viktor Todorov Dakov  
TrackingSystem

**ESTONIA | Computing-08**

Kristjan Kongas  
Simulation of the collision of binary white dwarfs using a cubic grid - stability analysis by variation of diffusion constant and resolution

**FINLAND| Computing-05**

Iiro Kumpulainen  
Eero Valkama  
Digitalization of Chess Games using Computer Vision

**GERMANY | Computing-09**

Tassilo Constantin Schwarz  
Drone detection system: Detection, tracking and classification of potentially dangerous flight objects for multicopter defence

**HUNGARY | Computing-03**

Roland Krisztián Horváth  
Fanni Tóth  
Mutasd!

**ITALY | Computing-02**

Valerio Pagliarino  
LaserWAN: Laser broadband internet connection

**LATVIA | Computing-07**

Zlata Potiljčina  
Application of computer vision for processing laser ray reflection image in seismic monitoring of city buildings

**TURKEY | Computing-04**

Necim Erdem Öksüz  
Serhat Danişan  
NAP (Nested Adaptive Prediction)

## ENGINEERING

**AUSTRIA | Engineering-15**

Jonathan Reisinger  
Daniel Andreas Höllerer  
Slackline Tensioning System

**BELARUS | Engineering-02**

Artsiom Sidzenka  
Heat pipes

**BULGARIA | Engineering-10**

Ivan Hristov Ivanov  
Vasilen Rosenov Tsvetkov  
Intelligent Planting

**CHINA | Engineering-09**

Ran Xu  
Design of Water Rocket Launcher of Electric Pump in a Double- Layer Orbits

**EGYPT | Engineering-06**

Ahmed Hossam Gamaleldeen  
Mohamed Aweis  
Turbine-Driven Engine

**FRANCE | Engineering-16**

Guillaume Dubois  
Arthur Cornet  
Anaëlle Mangin  
Gant Piano - Piano Glove

**GEORGIA | Engineering-12**

Giorgi Shalva Kipshidze  
Aleksandre Irakli Khokhlishvili  
Teachable system on basis of micro controller

**HUNGARY | Engineering-05**

Tamás Imets  
A Tool for The Mind

**ICELAND | Engineering-07**

Ingibjörg Sóley Einarsdóttir  
Liłja Ýr Guðmundsdóttir  
Detecting differences among brain waves between thinking and performing an action for use in responsive programming

**ITALY | Engineering-03**

Cristina D’Amato  
Simone Margarito  
Cherry Flavour Concrete Innovative Biomaterial for Thermal Insulation

**LATVIA | Engineering-11**

Daniela Gods-Romanovska  
Zane Grēta Grants  
The textile-based tensoresistive sensors’ operation and their usage in the innovative technologies

**SLOVENIA | Engineering-08**

David Starič  
Flower watering solution

**SPAIN | Engineering-01**

Alfonso Mateo Aguarón  
Fernando Herce Peña  
Application of Nylon thread to the Development of Artificial Muscles

**SWITZERLAND | Engineering-13**

Balduin Dettling  
Development of a 3D Display

**UKRAINE | Engineering-14**

Danylo Semerak  
Universal platform with voice control

**UNITED KINGDOM | Engineering-04**

Rogan Colin Michael McGilp  
Po Yin Chau  
Ethan Lee Dunbar-Baker  
David’s Wheels; a disability accessible and driveable hot rod for social and physical mobility

## ENVIRONMENT

**CYPRUS | Environment-05**

Andreas Symillides  
Michalis Onoufriou  
Savvas Kyriakidis  
Solar-driven Fenton treatment for the removal of antibiotic-related microcontaminants in an urban wastewater effluents

**CZECH REPUBLIC | Environment-06**

Eliška Bršlicová  
Subvolcanic intrusions in South Bohemia

**EGYPT | Environment-02**

Yasmeen Ebrahim  
Manar Mahmoud  
Fuel extracted from plastic

**IRELAND | Environment-03**

Diana Bura  
Mari Louise Fufezan  
An Investigation into the Effects of Enzymes used in Animal Feed Additives on the Lifespan of *Caenorhabditis Elegans*

**SLOVENIA | Environment-04**

Aleksander Breznikar  
Banana Peel- Only A Waste Or Something Else

**SOUTH KOREA | Environment-09**

Yongchan Hong  
Yunji Seo  
Agricultural application of halobacteria and their compatible solutes in enhancing plant salinity endurance

**SPAIN | Environment-01**

Xiana Fernandez Gonzalez  
Mariana Cabaleiro Lago  
Proposal of a Standard to Measure Ecosystems’Functionality through Organic Material Decomposition Speed

**SWEDEN | Environment-07**

Olivia Mikaela Norlin  
Framtida översvämningsscenarier i Falun

**UKRAINE | Environment-08**

Rostyslav Blium  
Comparative analysis of fatty acids composition of cruciferous plant oil as a perspective biofuel source and eco-friendly biodiesel production from camelina

## MATERIALS

**POLAND | Materials-01**

Maciej Marcel Mańka  
Lung-on-a-chip Device

## MATHEMATICS

**BELARUS | Mathematics-02**

Liana Khazaliya  
The regularity of cycles in permutation groups

**BULGARIA | Mathematics-03**

Pressiana Ivaylova Marinova  
Existence of zero sums in subsets of finite vector spaces

**LATVIA | Mathematics-04**

Reinis Cirpons  
Algorithms for determining predicates on polynomial degrees of Boolean functions

**NORWAY | Mathematics-01**

Torstein Vik  
Ane Kristine Espeseth  
Motivic Symbols and Classical Multiplicative Functions

**POLAND | Mathematics-06**

Jadwiga Agnieszka Czyżewska  
Colouring of the plane, lines and circles

**RUSSIA | Mathematics-05**

Galina Alexandrovna Vladimirova  
Unicursal Stars with different steps of construction

**SWITZERLAND | Mathematics-08**

Vinzenz Ludwig Phillip Thoma  
The Hitchhiker’s Guide to measuring investor reactions

**USA | Mathematics-07**

Pei-Hsuan Chang  
Nested Eggs: Where Brianchon, Pascal and Poncelet Meet

## MEDICINE

**CANADA | Medicine-06**

Kayley Noelle Ting  
Analysis of Electrodermal Activity to Quantify Stress Levels in Autism

**CZECH REPUBLIC | Medicine-03**

Tomáš Heger  
Biological activity of essential oils and extracts from narrow-leaved lavender (*Lavandula angustifolia* Mill.) flower

**DENMARK | Medicine-08**

Frederikke Moll Engesgaard  
Can of-CS and rVAR2 methods detect early stage cancer?

**ISRAEL | Medicine-01**

Tal Cohen  
Yuval Feldman  
Amalya Ben Asher  
Aggregated Drip Infusion System

**LITHUANIA | Medicine-02**

Rūta Prakapaitė  
Antimicrobial bacteriophage dressing in chronic wound treatment

**POLAND | Medicine-04**

Igor Kaczmarczyk  
Amber drug. A study of the antibacterial action of extracts of fossil and subfossil resins

**SLOVAKIA | Medicine-05**

Daniel Krchňák  
Erik Szabó  
Application of Essential Oils Onto Patogen Bacteria

**SWEDEN | Medicine-07**

Johan Emil Belfrage  
Niklas Carl Anders Sandwall  
Veronica Ellinor Enblom  
Dried Blood Spots - A Preferred Sample Type for Blood Biomarkers

## PHYSICS

**BELGIUM | Physics-11**

Liese D’Haen  
Elke Handstanger  
Joon Broeckaert  
Propeller efficiency

**FRANCE | Physics-08**

Alexis Nabil Bossard  
Florent Alexis Baubet  
Luc Régis Baudinaud  
Diffusion compensation by anticipation

**GERMANY | Physics-10**

Ivo Zell  
A wing is enough: An improved flying wing based on a bell-shaped lift distribution

**HUNGARY | Physics-12**

Péter Udvardi  
Microelectromechanical structure for sensing of low frequency sounds and vibrations

**ISRAEL | Physics-04**

Botros Ousama Muallem  
Hearing aid according to Fresnel diffraction principal

**LUXEMBOURG | Physics-02**

Tom Herz  
Sam Herz  
The electromagnetic car

**NORWAY | Physics-03**

Mikhail Zakharov  
Investigation of salinity impact on rate and amplitude of the seasonal water temperature changes in a fjord in Western Norway

**RUSSIA | Physics-06**

Daria Alexandrovna Bereychuk  
Complex of technical devices and software “HoF” (“Hand of Friend”) for using in laboratory works with disabled children (visually or hearing impaired)

**SOUTH KOREA | Physics-07**

Been Seo  
Jinho Bae  
Kyongsoo Kim  
A Study of Visualizing the Characteristic of Capacitor and Gauss’s Law by using LED

**SPAIN | Physics-01**

Jaime Redondo Yuste  
A Study of the Interaction between a Magnetic Field and Electronic Ions

**UKRAINE | Physics-09**

Dmytro Tvardovskyy  
The effects of mass transfer and presence of the third components in the close stellar systems

## SOCIAL SCIENCES

**CHINA | Social Sciences-05**

Ziting Huang  
Investigation and Protection of city buildings of different periods - Taking Fuzhou as an Example

**GEORGIA | Social Sciences-04**

Vakhtang Kakha Manjgaladze  
Ana Grigol Gvelesiani  
Emerging Method for Non-violent Minimization of Extremism in the Society

**ISRAEL | Social Sciences-02**

Naama Schor  
The morality of larks and owls: relationship between the biological clock and morality in decision making.

**NORWAY | Social Sciences-01**

Idunn Maria Brosset  
Paris, 17 October 1961

**SWITZERLAND | Social Sciences-05**

Silvan Fischbacher  
The Director: From Servant to Master

**TURKEY | Social Sciences-06**

Melis Kırtılı  
The Image in the Mirror - Yhe Mirror in the Image

