Information about the most important events in 2019
Association of Polish Innovators and Rationalizers

13th edition of the International Exhibition of Inventions "IWIS 2019" was held on October 14-16, 2019 in the Main Hall of the Warsaw University of Technology. As in previous years, the event was organized by the Association of Polish Inventors and Rationalizers in cooperation with the Polish Patent Office and the Warsaw University of Technology.

Once again, the exhibition IWIS 2019 was held under the auspices of the President of the Republic of Poland Andrzej Duda. Among the patronage of this year's show were the Ministry of Science and Higher Education, the International Federation of Inventors (IFIA), the European Association of Inventors (AEI), the Polish Federation of Engineering Associations NOT and the Main Council of the Research Institutes RGiB.

IWIS is Poland's largest international exhibition dedicated to the promotion of invention and innovation. During the 13th edition were presented solutions from about 20 countries, including Romania, Croatia, Hungary, Moldova, Turkey, Malaysia, Indonesia, Iran, Taiwan, Canada, Thailand, Russia and Poland. Inventors presented more than 200 solutions in various fields of science, which are a review of technical achievements, some of which have found their place in the industry, and partly awaiting for implementation.

Thanks to the financial support of the Ministry of Science and Higher Education (under contract 850/1//P-DUN/2019 by the Ministry of Science and Higher Education allocated for scientific dissemination activities), the Association of Polish Inventors and Rationalizers have the opportunity to organize this year's exhibition IWIS which presented innovative solutions from more than 80 scientific entities (research institutes, colleges and universities). The International Jury awarded the exhibitors for their inventions following medals: platinum, gold, silver and bronze. In addition, the exhibitors have received a number of special awards to the individuals and organizations that participated in this year's exhibition.

The main task of the International Exhibition of Inventions IWIS is to present achievements of polish scientist and inventors to national and foreign entrepreneurs and institutions. This creates the opportunity to establish commercial contracts for implementation of innovations to the industry, what have contribution to the growth of polish economy. Other important aim of IWIS is to promote innovative attitude and innovation-based perception of the world among young people, what can be the motor for taking on new challenges.

The Opening Ceremony of the 13th International Warsaw Invention Show IWIS 2019 was accompanied by Rector of Warsaw University of Technology prof. Stanisław Wincenciak, minister Piotr Ziółkowski from Ministry of Science and Higher Education and the President of the International Federation of Inventors' Associations Mr Alireza Rastegar. During the ceremony short speech were given also by the president of the Polish Federation of Engineering Associations NOT Ewa Mańkiewicz – Cudny.

Members of the International Jury of IWIS 2019 had a difficult task to select the best solution, because each of them presented very high substantive and technological level.

Finally **Grand Prix IWIS 2019** went to Oil and Gas Institute - National Research Institute from Poland for **"**A biocidal-stabilising composition for biofuels**".** *The invention subject consists of a biocidal - stabilising composition for biofuels, in particular for fatty acids methyl esters as a biocomponent to the diesel oil or an independent alternative fuel to the diesel oil. It is known that biofuel storage and distribution conditions increase its susceptibility to microbiological infection. This manifests in*

precipitation of deposits and slurries, biofuel propensity for emulsification, and permanent emulsions increase the bioesters propensity for hydrolysis and increased acid number. A microbiological infection results in the fuel turbidity and in filterability deterioration, in increased pollution in the form of deposits, in fuel colour and smell change, and in increased viscosity. In many cases microbes in contact with water form a biofilm strongly adhering to tanks surfaces. The biofilm matrix structure is stabilised due to extracellular polymeric substances (EPS). A biofilm formation is a process consisting of many stages. In the first stage microbes are initially connected to the tank surface by weak bonds, remaining in permThe biofilm matrix structure is stabilised due to extracellular polymeric substances (EPS). A biofilm formation is a process consisting of many stages. Biofilm affects electrochemical processes proceeding on the metal surface. The electrochemical processes proceeding on the metal surface break the passive layer and pitting or even crevice corrosion occurs, very difficult to monitor and being the reason for tank walls damage, threatening with fuel leakage. A biocidal - stabilising composition for biofuels features improved biocidal - stabilising properties through inhibition of biofilm matrix formation and prevention of microbiologically induced corrosion. It contains a surfactant with properties highly wetting the surface, preventing irreversible adhesion of microbes and a biocidal compound, containing in particular oxazolidine groups, oxidation inhibitor, a hydrocarbon solvent, and a co-solvent.

The Main Award of International Federation of Inventors Associations IFIA went to JIW INWEX Sp. z o.o. from Poland for the invention „Polish Health Foods – panecea for chronic diseases". *In Poland, the list of chronic diseases is published in the Journal of Laws, by way of a Regulation of the Ministry of Health and Health Care. The list includes over 150 disease entities. The most important diseases include cardiovascular diseases, diabetes, neoplasms, epilepsy and obesity. Chronic diseases constitute a group of diseases that are currently incurable, last all life, and cause premature death. The chronic disease incidence rate is increased by more than ten percent each year. The main cause for these diseases is the total lack of macro, micro- and ultraelements in the soil, and thus in the whole food chain, as well as the presence of toxic pesticides. The creators have developed a comprehensive technology of fertilising soil with micronised supplements in the amount of 100 easily accessible elements, as well as ecological fertilizers and plant protection products. In the course of the past few years, laboratory, garden and industrial research has been performed which demonstrated a two- or three-fold increase in organic crops with multiple amounts of supplements, vitamins, tannins and enzymes.*

During the IWIS 2019 not only research institutes presented their achievements. Among exhibitors were also enterprises, universities, schools, and individual inventors. All solutions were classified according to 12 different categories ranging from ecology and environmental protection, mechanics, electronics, energy to the medical solutions.

World Competition of Chemical Inventors is the contest organized by the International Federation of Inventors' Association IFIA. During this year's exhibition the 8th edition of the World Competition of Chemical Inventions has taken place.

The main prize of the of the 8th World Competition of Chemical Inventions went to Malaysia for the invention "Utilization of Biomaterials Derived from Cockle Shell Waste as Bio-scaffold in Bone Tissue Engineering" from UNIVERSITI MALAYSIA PAHANG. *The ultimate objective of this study is to develop bone scaffold derived from cockle shells that have good physicochemical, mechanical and biocompatibility properties to be applied as material in dental application for bone tissue engineering. The process of fabricating the bone scaffold involved four main stages; pre-treatment of cockle shells, production of Hydroxyapatite (HAP), fabrication of bone scaffold using HAP and Calcium Carbonate (CaCO3) and verification of bone scaffold for its physicochemical, mechanical and biocompatibility properties. Based on our research, the production of bio-scaffold derived from cockle shells is feasible in term of those properties as compared with the natural bone. This work is in collaboration with Faculty*

of Restorative Dentistry University of Malaya as the end user of the bone scaffold. Overall, the development of this product will eventually help to reduce the cost of dental/bone implant.

In summary, the 13th edition of International Warsaw Invention Show IWIS 2019 was a great success. The event every year attracts more and more exhibitors and visitors. We hope that the exhibition will result in a number of implementations of the presented inventions and innovations.

The Association of Polish Inventors and Rationalizers engaged in various competitions connected with innovations. On 11th June, the 11th edition of the National Competition ***"Young Innovator"*** took place in the Warsaw House of Technology NOT. The contest organized by the FSNT-NOT and the Association of Polish Inventors and Rationalizers was aimed at inspiring young Poles to think and act creatively in their future professional lives. The Association of Polish Inventors and Rationalizers distinguished four inventions. The awarded Young Innovators received an opportunity to participate and presentation of their innovations on the 12th International Warsaw Inventions Show – IWIS 2018.

Moreover, on 11th June, 2019, the Patent Office of the Republic of Poland organized the official awards ceremony for the winners of the competition "**Student-Inventor**." The Association of Polish Inventors and Rationalizers distinguished 5 inventions. The President of APIaR, Michał Szota honored the laureates with free invitations to participate in the 13th International Warsaw Inventions Show – IWIS 2019. Association of Polish Inventors and Rationalizers supports also their participation at Geneva Inventions in 2020.

The Association of Polish Inventors and Rationalizers took part in exhibitions and conferences dedicated to the innovations and modern economy. On 8th November, 2019, in the Warsaw House of Technology NOT, took place a gala concluded the 7th edition of the competition **"Laur Innowacyjności/ Innovation Laurel"**. The competition was organized for the companies which succeeded in economy and used innovative solutions and ideas.

In 2019 the Association of Polish Inventors and Rationalizers took part and organized polish stand during many International Exhibitions of Inventions such as (i.a.):

- Bangkok International Intelectual Property, Invention, Innovation and Technology Exhibition IPITEX 2019, Thailand, Bangkok
- 46. International Exhibition of Inventions Geneva 2019, Switzerland, Geneva
- Pro Invent 2019, Romania, Cluj Napoca
- European Exhibition of Creativity and Innovation Euroinvent 2019, Romania, iasi
- SVIIF 2019, United Sates of America, Santa Clara
- iCAN, Canada, Toronto
- International Invention Show and Technomart INST 2019, Taiwan, Taipei
- IYIA 2019, Indonesia
- International Exibition of Inventions ARCA 2019, Croatia, Zagreb
- International Trade Fair - Ideas - Inventions - New Products iENA 2019, Germany, Nurnberg
- SIIF 2019, Korea, Seoul.

In addition to the promotion of Polish innovative solutions at the international exhibitions of innovation, the Association of Polish Inventors and Rationalizes also cared about the atmosphere in the Polish exhibition stands. During the exhibition, "Geneva Inventions 2019", the Association of Polish Inventors and Innovators organized, as every year, a "Polish Day". It was an event dedicated to honoring Polish inventions and innovations presented at the exhibition.

Association of Polish Inventors and Rationalizers constantly collaborates with Polish diplomatic missions and embassies all over the world, among others, in Malaysia, Switzerland, Taiwan, Thailand, Russia, Germany.

President of the
Association of Polish Inventors
and Rationalizers