

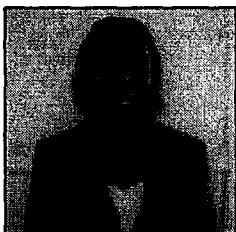


HR0900074



HR0900073

traditional use of *Moringa oleifera* for the treatment of infectious diseases.



Dr. Joyce Manoti Ondicho is Bachelor of Science in Chemistry (Major) and Mathematics, Kenyatta University, 2003, Phytochemistry. Current research Activities: Isolation of bioactive compounds. Phytochemical analysis of medicinal plants. Antimalarial and antibacterial bioassay of medicinal plants and their safety.

capable of withstanding any threats, which may arise for population and living organisms.

Present-day level of machine-building, electrical engineering, and electronics allows predict creation of industrial plasma installations, adapted to conditions of various terrorist threats, with minimized power consumption and optimized technological parameters. Applied aspect of existing scientific school is at the first stage of evolution yet; however, as it is proved by results of theoretical and experimental investigations, in the nearest future one should expect its new technological outburst in the industry, regarding solution of problems of safety of people's vital activity. Results of investigations given in the report represent only minor part of the wide range of possible practical applications of low-temperature non-equilibrium contact plasma for treatment of water and aqueous media in various fields of engineering and technology.

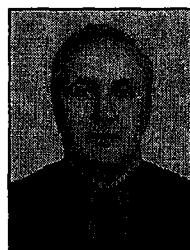
51. AQUEOUS MEDIA TREATMENT AND DECONTAMINATION OF HAZARDOUS CHEMICAL AND BIOLOGICAL SUBSTANCES BY CONTACT PLASMA

Alexander Pivovarov

Prof. dr., Alexander Kravchenko, Valery Kublanovsky¹
Ukrainian State University of Chemical Engineering,
Dnepropetrovsk

Ukraine

¹V.I. Vernadsky Institute of General and Inorganic
Chemistry of National
Academy of Science, Kiev
Ukraine



Dr. Alexander Pivovarov is Professor of the State University of Chemical Engineering, Dnepropetrovsk City, Ukraine. He is specializing in providing water treatment technologies, health protection and risk management. He participates in the Ukraine-NATO scientific-practical program. One of his main lines of scientific activities include the development of new technologies of decontamination in conditions of chemical, biological, radiological terrorism.

Usage of non-equilibrium contact plasma for processes of decontamination and neutralization in conditions of manifestation of chemical, biological and radiation terrorism takes on special significance due to portability of equipment and its mobility in places where toxic liquid media hazardous for people's health are located. Processes of decontamination of aqueous media, seminanted with pathogenic microorganisms and viruses, treatment of water containing toxic heavy metals, cyanides, surface-active substances, and heavy radioactive elements, are investigated. Examples of activation processes in infected water and toxic aqueous solutions present convincing evidence of the way, how new quality technological approach for achievement of high enough degree of the said media treatment is used in each specific case. Among new properties of water activated as a result of action of non-equilibrium contact plasma, it is necessary to mention presence of cluster structure, confirmed by well-known spectral and physical-chemical methods, presence of peroxide compounds, active particles and radicals. Anti-microbial activity which is displayed under action of plasma in aqueous media (chemically pure water, drinking water, aqueous solutions of sodium chloride, potassium iodide, as well as other inorganic compounds) towards wide range of pathogenic and conventionally pathogenic microorganisms allows use them as reliable, accessible and low-cost preparations for increasing the degree of safety of food products. Combination of such processes with known methods of filtration and ultra-filtration gives an efficient and available complex

52. PUBLIC AWARENESS – CALENDAR WITH INFORMATION ABOUT EMERGENCY PREPAREDNESS

Sunčana Podhraški Benković

Nevenka Novosel

State Office for Nuclear Safety in co-operation with the Ministry of Science, Education and Sport, Nuclear Power Plant Krško (in Slovenia) and Agency for Education during the years 2002 till now realized the project of preparing the calendar for families living in the circle 25 km from the Nuclear Power Plant Krško (Slovenia) and in the circle of 100 km from Nuclear Power Plant Paks (Hungary).

The calendars are containing primary school pupils' paintings about energy, environment, nuclear technology and additional information about preparedness in the Republic of Croatia in the case of nuclear accident and recommendation for acting.

Collecting of paintings is carried out each year between pupils from second to eight grades in the schools near Nuclear Power Plant Krško and Nuclear Power Plant Paks. Expert commission chose twelve best paintings for the following year.

This kind of project is only one way of public relations and awareness which helps in expanding knowledge