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Rivers with drinking water – urgent challenge for Ukraine

Petro Gvozdyak

Institute of colloid chemistry and water chemistry, NAS of Ukraine

gvozdyak@ukr.net тел. +38095-888-09-24

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Тема: AIWW - The Drop 🍀 - Update AIWW 2021, drinkable rivers, water management on SIDS and more

От: Amsterdam International Water Week <info@amsterdamiww.com>

Дата: 23.09.2020, 14:53

Кому: gvozdyak@ukr.net

"A culture of care is essential for all life on earth"

In this series of interviews we present members of our AIWW community. This time: **Li An Phoa, founder of Drinkable Rivers Foundation.**

Тема: AIWW - The Drop 🍀 - Themes 2021, Mayors for a Drinkable Meuse and water as our friend

От: Amsterdam International Water Week <info@amsterdamiww.com>

Дата: 28.11.2020, 23:11

Кому: gvozdyak@ukr.net

A new family is born: Mayors for a Drinkable Meuse

"Rivers are vital for all life on earth, rivers are our lifelines. We cannot live without water, we are water. All living beings are part of a watershed, so we will all benefit from drinkable rivers," says Li An Phoa, whose initiative Drinkable Rivers is one of AIWW's Amsterdam Agreements. Last Friday Li An organised an online event for the network Mayors for a Drinkable Meuse that AIWW technically supported, with over 50 participants joining; mayors from the cities in the Meuse river basin, national and regional river authorities, water associations and other river initiatives.







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Li An Phoa

In this series of interviews we present members of our AIWW community. This time: Li An Phoa, founder of Drinkable Rivers Foundation. The [Drinkable Rivers Foundation](#) works towards a world with drinkable rivers, by raising awareness and mobilising people to protect rivers with concrete action. Recently Li An and AIWW have articulated the new Amsterdam Agreement: Mayors for Drinkable Rivers.



What is drinking water? Water which is intended for everyday, unlimited and safe consumption

„Chemistry and water technology”
2018 tutorial





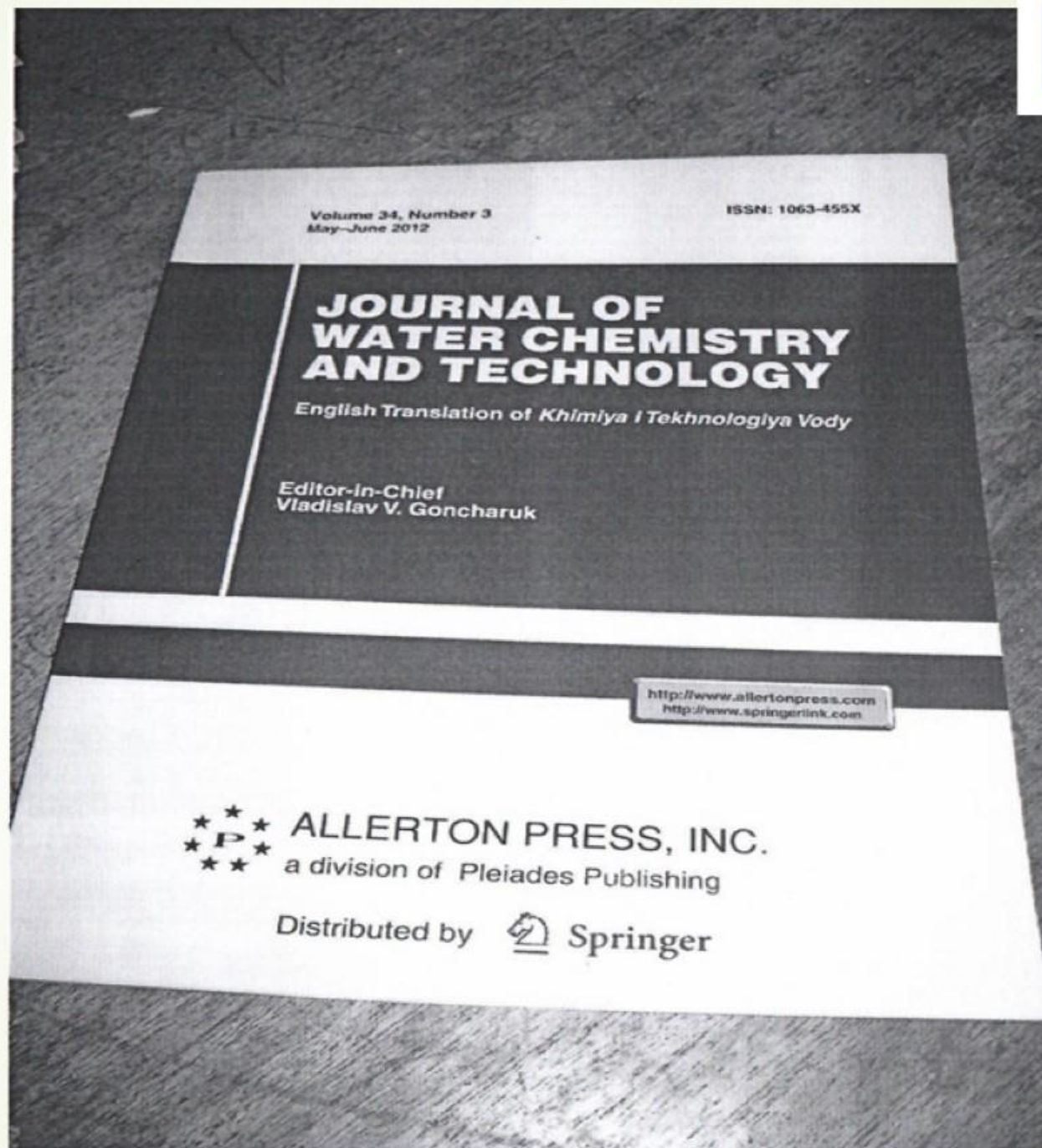
(продовження)

- «фасованная (бутилированная) вода» (стр. 467);
- «питьевая вода централизованного водоснабжения» (стр. 480);
- «питьевая вода нецентрализованного водоснабжения доочищенная» (стр. 483);
- «нефасованная питьевая вода доочищенная» (стр. 476);
- «фасованная питьевая вода доочищенная» (стр. 476);
- «привозная обработанная или необработанная питьевая вода» (стр. 477).



Honcharuk SOS: Drining water-2010

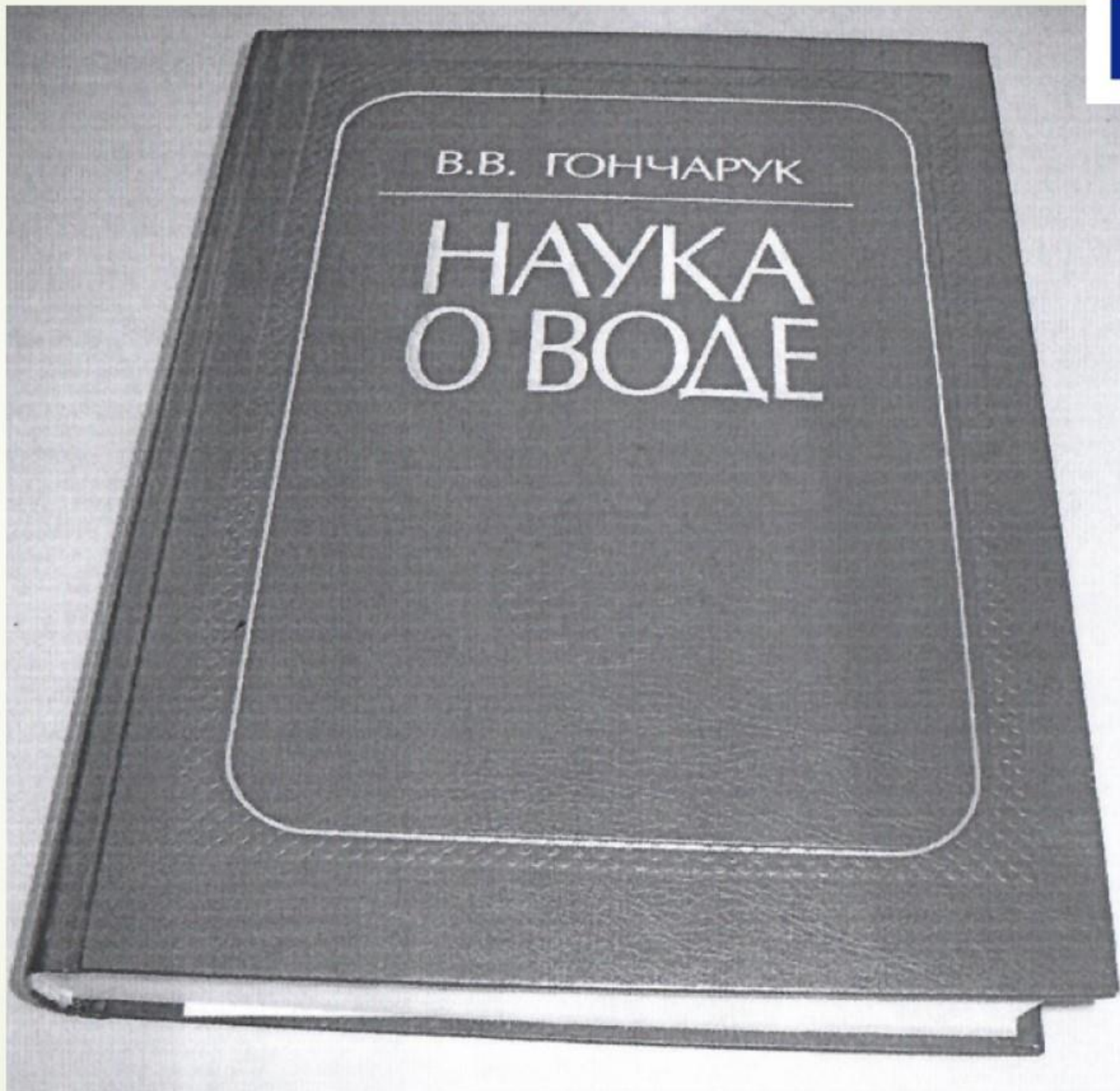
- Save drinking water;
- High quality drinking water;
- Good quality drinking water;
- Drinking water of guaranted quality;
- Drinking water of increased quality;
- Drinking water of the best quality;
- Absolutely safe for human health drinking water;
- Purified drinking water;
- Bottled water;
- Water from central water-supply;
- Unbottled purified water;
- Bottled purified water;
- Imported (un)processed drinking water





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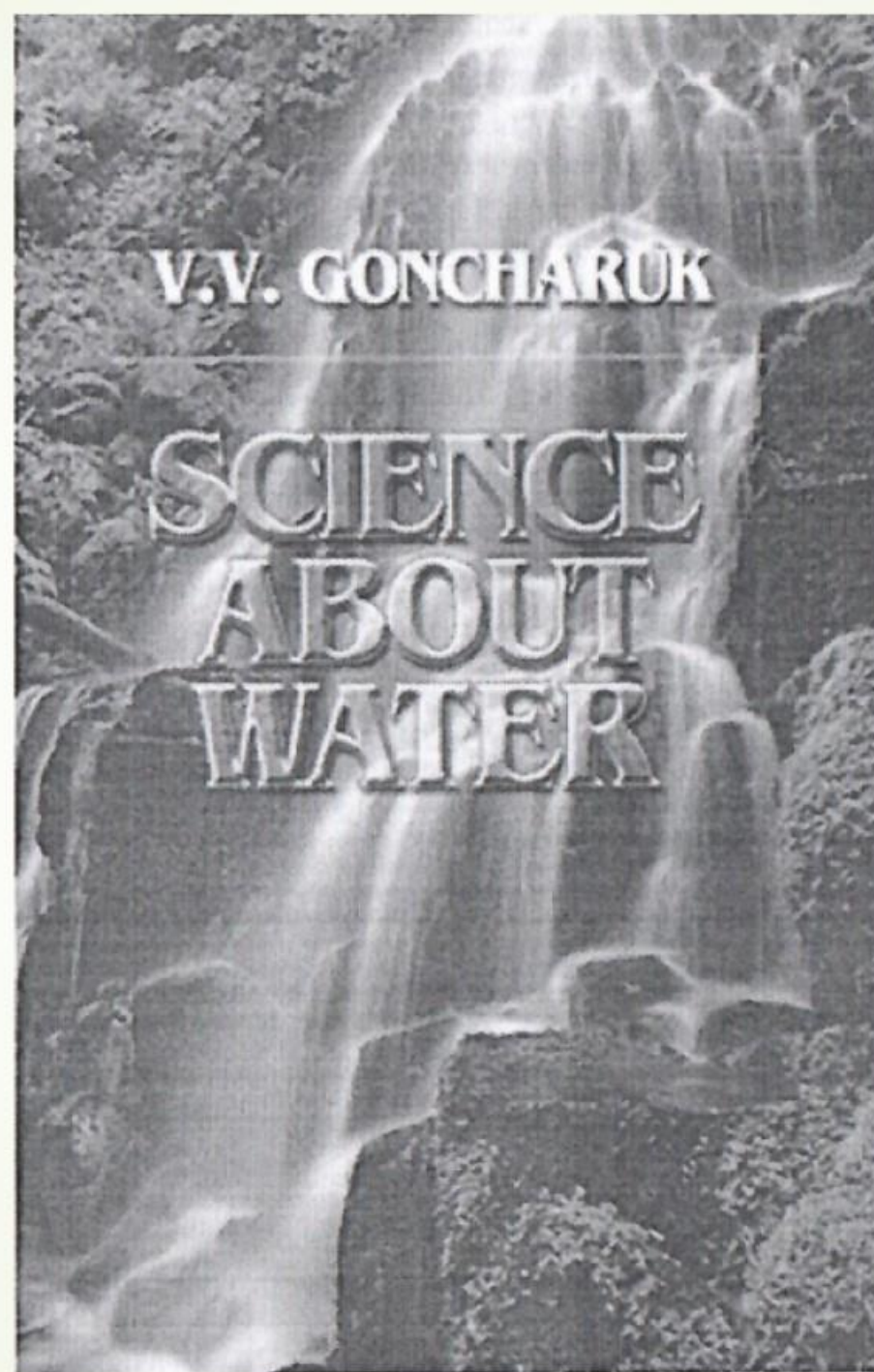
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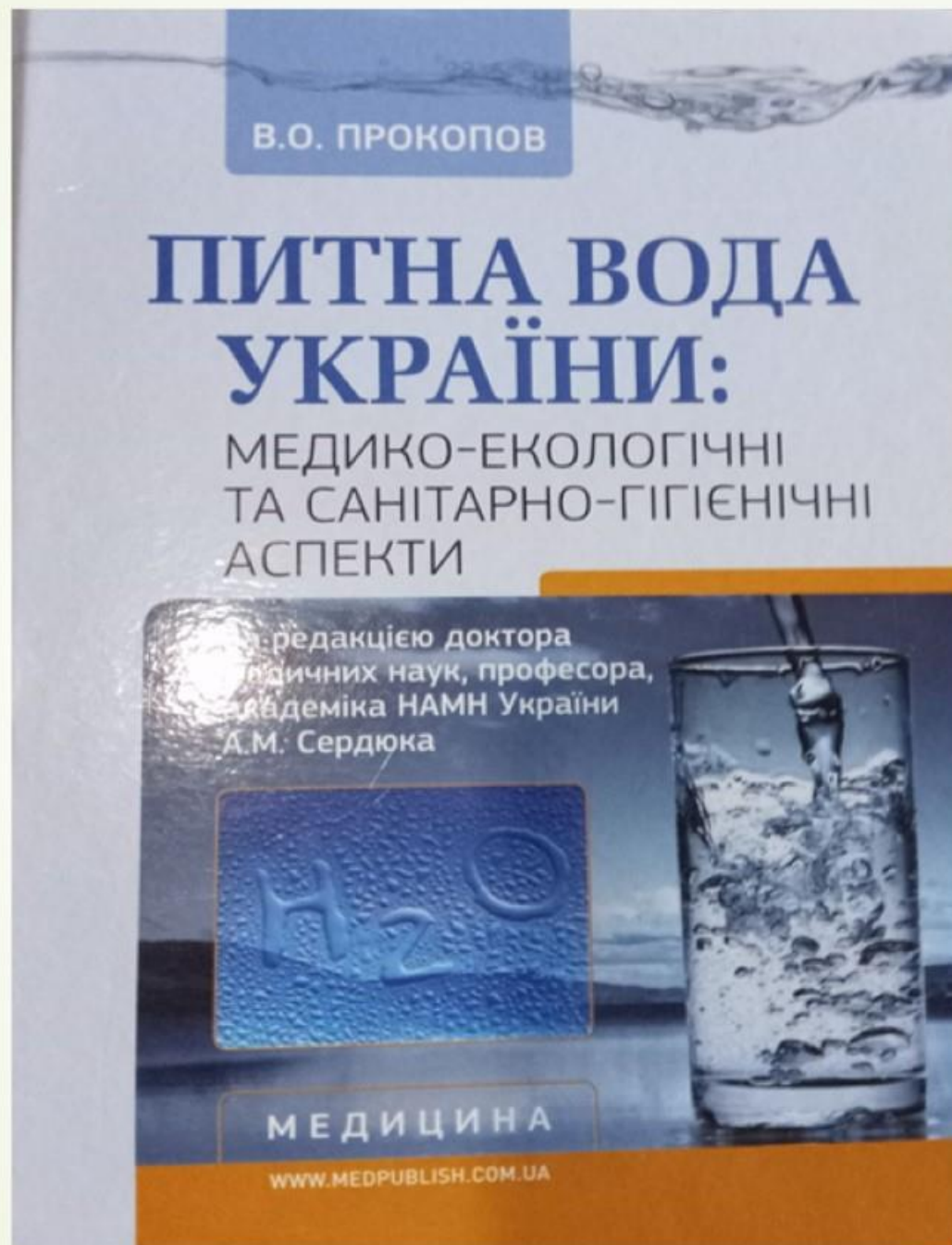
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It demonstrates two main points:

- 1) Drinking water – very complicated substance, that nowadays there is no any scientific, generally accepted definition for „drinking water”;
- 2) There won't be any drinking water in Ukraine, until we obtain the high quality drinking water in our rivers.



Drinking water – predominantly ecological problem



In the last century in the United States lived a very famous scientist, biologist, geneticist of ukrainian origin Theodosius Dobzhansky, who shortly before his death in 1973 published an extremely interesting article entitled „Nothing in Biology Makes Sense Except in the Light of Evolution “. And despite the fact that the word "water" wasn't used in this article, we decided to take the advice of Professor Dobzhansky and consider the biological problem of drinking water "in the light of evolution." It turns out that humanity from ancient time and throughout its evolution (or history of development) until recent times drank... surface (ground) water.



Nothing in Biology Makes Sense Except in the Light of Evolution

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THEODOSIUS DOBZHANSKY

AS RECENTLY AS 1966, sheik Abd el Aziz bin Baz asked the king of Saudi Arabia to suppress a heresy that was spreading in his land. Wrote the sheik:

"The Holy Koran, the Prophet's teachings, the majority of Islamic scientists, and the actual facts all prove that the sun is running in its orbit . . . and that the earth is fixed and stable, spread out by God for his mankind. . . . Anyone who professed otherwise would utter a charge of falsehood toward God, the Koran, and the Prophet."

The good sheik evidently holds the Copernican theory to be a "mere theory," not a "fact." In this he is technically correct. A theory can be verified by a mass of facts, but it becomes a proven theory, not a fact. The sheik was perhaps unaware that the Space Age had begun before he asked the king to suppress the Copernican heresy. The sphericity of the earth had been seen by astronauts, and even by many earth-bound people on their television screens. Perhaps the sheik could retort that those who venture beyond the confines of God's earth suffer hallucinations, and that the earth is really flat.

Parts of the Copernican world model, such as the



One of the world's leading geneticists, Theodosius Dobzhansky is professor emeritus, Rockefeller University, and adjunct professor of genetics, University of California, Davis 95616. Born in Russia, in 1900, he is a graduate of the University of Kiev and taught (with J. Philipchenko) at the University of Leningrad before coming to the U.S., in 1927; thereafter he taught at Columbia University and the California Institute of Technology before joining the Rockefeller faculty, in 1962. He has been president of the Genetics Society of America, the American Society of Naturalists, the Society for the Study of Evolution, the American Society of Zoologists, and the American Teilhard de Chardin Association. Among his many honors are the National Medal of Science (1964) and the Gold Medal Award for Distinguished Achievement in Science (1969). He holds 18 honorary doctorates from universities in this country and abroad. Among his well-known books are *The Biological Basis of Human Freedom* (1956) and *Mankind Evolving* (1963). The present paper was presented at the 1972 NABT convention.

contention that the earth rotates around the sun, and not vice versa, have not been verified by direct observations even to the extent the sphericity of the earth has been. Yet scientists accept the model as an accurate representation of reality. Why? Because it makes sense of a multitude of facts which are otherwise meaningless or extravagant. To nonspecialists most of these facts are unfamiliar. Why then do we accept the "mere theory" that the earth is a sphere revolving around a spherical sun? Are we simply submitting to authority? Not quite: we know that those who took time to study the evidence found it convincing.

The good sheik is probably ignorant of the evidence. Even more likely, he is so hopelessly biased that no amount of evidence would impress him. Anyway, it would be sheer waste of time to attempt to convince him. The Koran and the Bible do not contradict Copernicus, nor does Copernicus contradict them. It is ludicrous to mistake the Bible and the Koran for primers of natural science. They treat of matters even more important: the meaning of man and his relations to God. They are written in poetic symbols that were understandable to people of the age when they were written, as well as to peoples of all other ages. The king of Arabia did not comply with the sheik's demand. He knew that some people fear enlightenment, because enlightenment threatens their vested interests. Education is not to be used to promote obscurantism.

The earth is not the geometric center of the universe, although it may be its spiritual center. It is a mere speck of dust in cosmic spaces. Contrary to Bishop Ussher's calculations, the world did not appear in approximately its present state in 4004 B.C. The estimates of the age of the universe given by modern cosmologists are still only rough approximations, which are revised (usually upward) as the methods of estimation are refined. Some cosmologists take the universe to be about 10 billion years old; others suppose that it may have existed, and will continue to exist, eternally. The origin of life on earth is dated tentatively between 3 and 5 billion years ago; manlike beings appeared relatively quite recently, between 2 and 4 million years ago. The estimates of the age of the earth, of the duration of the geologic and paleontologic eras, and of the antiquity of man's ancestors are now based mainly on radiometric evidence—the proportions of isotopes of certain chemical elements in rocks suitable for such studies.



Humanity has
grown on
surface water



DRINKING WATER

Freshwater, surface water,
groundwater which is constantly
created by **BIOSPHERE –**
Plants, animals, microbes, viruses (in
corpore)

Also **minerals, gases,**
electromagnetic factors



Natural preparation of drinking water occurs with biosphere technology, which Homo sapiens won't possibly recreate in future centuries.



Know-how of biosphere technology for surface water:

- evaporation of water molecules from the Earth's surface by solar radiation;
- absorption of water vapor from the air gases, volatile organic compounds;
- condensation of water vapor into fog and clouds, which return as precipitation on the Earth's surface;
- irradiation of clouds, precipitation by electromagnetic waves of cosmic origin;
- threading of water into the atmosphere by electric discharges and acoustic waves (lightning, thunder);
- action on the water of the Earth's magnetic field and gravity;
- extraction with water of various substances from plants, including medicinal;
- dissolution of salts, microelements, organic compounds from soil with water;
- enrichment of water with viruses, bacteria, fungi, algae and other aquatic organisms and their numerous metabolites;
- replenishment of circulating water with metabolic water;
- accumulation and storage of probable information by water...



What is current situation with water
right now ?

In Ukraine we **combined dwells with
toilets:**

Dump sewages into natural water
bodies and try to prepare water for
beverage.

*В Україні
масово поєднали
криниці з...
туалетами*





Any

chemical and/or physico-chemical

processing of purification

natural drinking water

worsen its quality,

physiological attributes,

denature drinking water.



The whole powerful arsenal of methods water treatment can and should be used for cleaning only wastewater and storm water before returning them to natural reservoirs for thorough biosphere convalescence - restoration to drinking water quality.



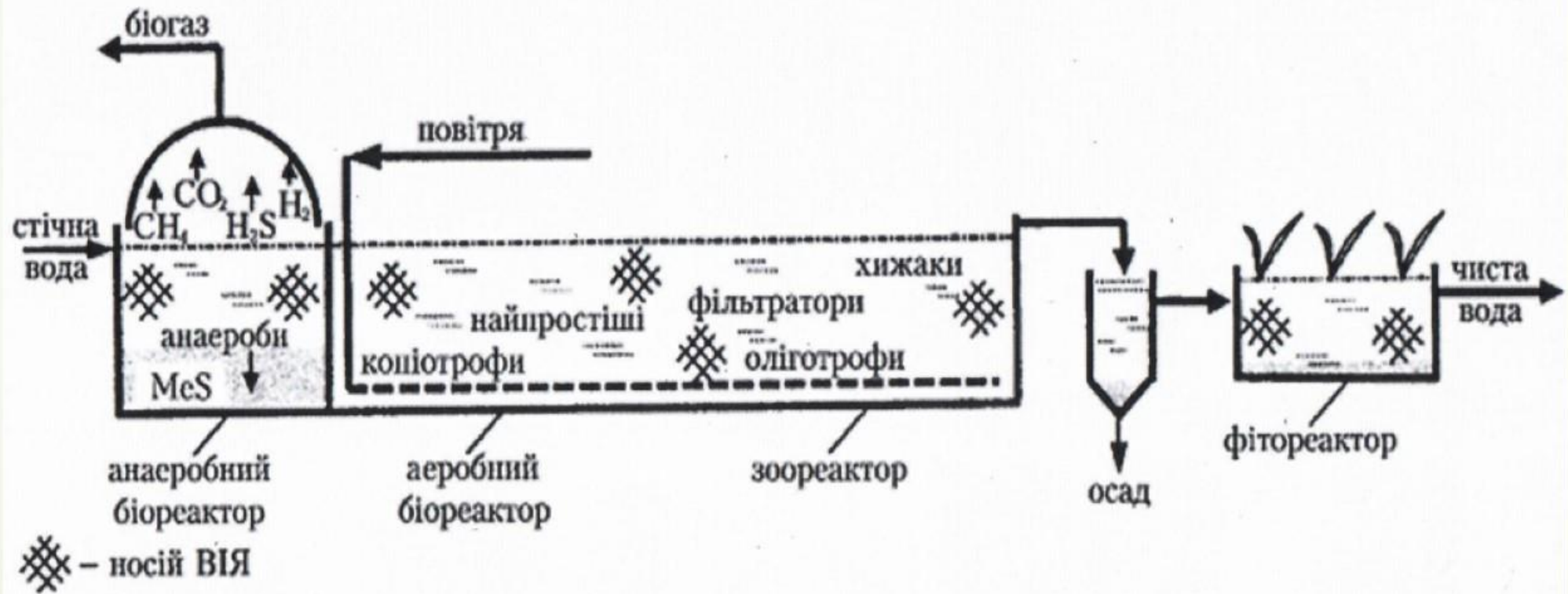
We need to restore and keep water quality in rivers on the highest level: **drinking water**



To do this, we have all conditions and opportunities:

We have theoretically substantiated, created and successfully tested in real conditions at more than twenty different enterprises of chemical, petrochemical, gas, wood, metal, leather and other industries a fundamentally new, direct-flowing biotechnology of wastewater treatment: "bioconveyer", which has already been included in textbooks for university students.

“Біоконвеєр”





The „bioconveyer” allows to treat any, even extremely toxic industrial sewage, to the set level of quality of the purified water. This produces a minimal (ten and even hundreds time less than in the traditional treatment with activated sludge) "excessive biomass".



We created measures „outdoor water biotechnologies”, which let us to restore the water quality in rare toxicoid storages, purify torrential waters, make primary biological water purification etc.



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All our water biotechnologies use patented, legalized by the technical conditions, approved by the Ministry of Health for usage in drinking water supply, technologically unsurpassed fibrous media „VIYA” for immobilization of microorganisms and retention of aquatic organisms in bioreactors.

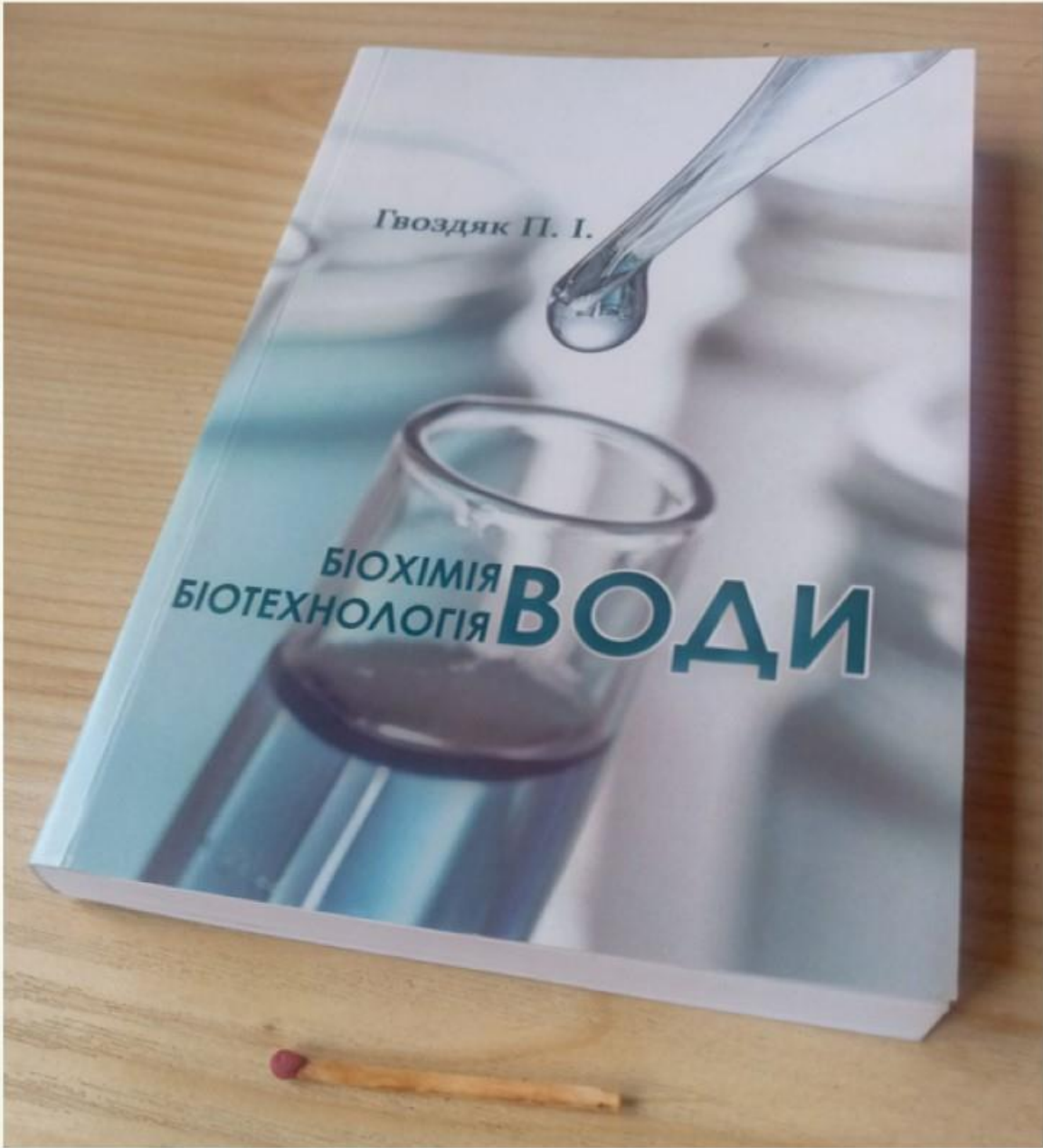




All this can be read in a small, pocket-sized monography "Water Biochemistry. Biotechnology of water", published in 2019 at the publishing house of „Kyiv-Mohyla Academy” University.



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That book on page 193 you can find next „water statements”:

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- ▶ After forced chemical, physical-chemical and physical water treatment or incomplete purification water should be directed into natural open basin for full occurrence, covalence, natural quality recovery; you need to take care of ecological safety (keeping nature-protection zones, not to admit unsanctioned emissions etc.) in case of emergency – intensification of self-cleaning feature of water basin using the biotechnology of open air to keep the good quality of drinking water
- ▶ Keeping the high quality of drinking water is a guarantee of confident water supply and high-priority challenge

I consider these statements are accordant with «Drinkable Rivers Foundation» idea of Li An Phoa.



I will **repeat constantly**

„The future has only that people who will learn how to recreate used water biotechnologically and won't be lazy to do that”



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THANK YOU FOR YOUR ATTENTION

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Contacts:
Coordinator: prof. Olena Mitryasova
e-mail: eco-terra@ukr.net;
phone: +380952880479

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