

**BIOFUELS – TECHNOLOGY, PROBLEMS AND PERSPECTIVES
REVIEW**

M. Ioelovich

Designer Energy Ltd, Rehovot 76100, Israel

bd895892@zahav.net.il

ABSTRACT

In this review current state, problems and perspectives of various types of biofuels (bioethanol, biobutanol, biodiesel, biohydrogen and biomethane) are discussed. It was shown that improved technology of bioethanol and biomethane from non-edible organic wastes are commercially attractive. The bioethanol of the second generation cannot fully replace all liquid fossil fuels; it can be used as supplement only in average amounts about of 10% from total volume of fossil gasoline produced in the world annually. Biomethane provides an additional energy for local consumers such as farms and settlements; however part of the biogas in the total energy consumption of economically developed countries currently is low, about 2-3% only. Main energy source for electric power stations in the near future will be probably huge reserves of shale gases and more intensive use of alternative energy (solar, wind, etc.), while in the remote future - thermonuclear energy.



SUPPRESSION OF FOREST FIRE BY HELICOPTER WITHOUT WATER

A. Bolonkin

New York, USA (<http://Bolonkin.narod.ru>)

Bolonkin@juno.com

ABSTRACT

The natural occurrences of wildfires damage nature areas, produce the hundreds of millions of dollars in losses, and considerable pollution of environment. The author suggests a very efficient method of suppression of a forest fire without water. He offers a system of simple light plates or anchor suspended from any helicopter which directs the helicopter propeller airflow against the direction of a wildfire. After some minutes the natural fuel burns away in the front of fire and the fire cannot advance. The author developed theory and methods computations and suggests some designs of the devices for so changing the helicopter airflow direction.



AB WIND WALL

A. Bolonkin

New York. USA (<http://Bolonkin.narod.ru>)

Bolonkin@juno.com

ABSTRACT

Author suggests and researches a new revolutionary method for changing the climates of entire countries or portions thereof, obtaining huge amounts of cheap water and energy from the atmosphere. In this paper is presented the idea of a cheap artificial fabric wind wall, which may cardinally change the climate of a large region or country. Additional benefits: The potential of tapping large amounts of fresh water and energy. The Walls has a parachute form and made from thin fabric (film) having heights of up to 3 - 5 km. They are located perpendicular to the main wind direction. Encountering these artificial walls, humid air (wind) rises to crest altitude, is cooled and produces rain (or rain clouds). Many natural mountains are sources of rivers, and other forms of water and power production - and artificial walls or mountains may provide these services for entire nations in the future. The wall is supported at altitude by wind, and is connected to the ground by thin cables. The author has shown (in previous works about the AB-Mountains and given articles) that this artificial wind wall allows control of the weather (rain, wind) and influences climate in a given region. This is a realistic and cheaper method of economical irrigation, getting energy and virtual weather control on Earth at the current time.



**INFORMATIONAL EVOLUTION OF THE UNIVERSE:
TWO APPROACHES TO THE LIVING SYSTEM EVOLUTION**

M.Nusinov, V. Kardashov , L.Eppelbaum
Tel Aviv University, Tel Aviv, Israel
levap@post.tau.ac.il:

ABSTRACT

The paper presents a novel view to very intricate and fundamental problem of the living systems evolution and their qualitative distinctions from nonliving complex systems. Two alternative approaches to the living system occurrence and evolution are discussed. First approach considers the living system generation as the high stage of the cosmic matter evolution without fundamental qualitative peculiarities. The matter evolution is considered as the impulsive (soliton-like) process of the cosmic matter and physical fields self-complication that triggered the generation of the living systems. An information exchange and its permanent evolution is considered as the main attribute of this process. The analogy of the Universe matter evolution with the giant computer and the living systems with the complex system of bio-computers were employed for analysis of the living systems occurrence. Second approach produces a phenomenological description of the living systems attributive properties from the view-point of synergetics – the modern theory of self-organization. The authors of the paper assume that these approaches could be scrutinized as disputable, but useful for the better understanding of the problems under study.