

A QUALITATIVE MODEL OF URBO-ECOSYSTEMS IN THE FRAME OF THE ACTIVE MEDIA CONCEPT

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Abstract. Urbo-ecosystems belong to the most actively evolving elements of the biosphere. They are formed by hierarchies of interrelated active media and are characterized by extreme anthropogenic loads, discrepancies between specific times and scales in evolution of their natural and anthropogenic subsystems, and by complex nets of positive and negative feedbacks. Of topical interest is development of a theoretical model of co-evolution of natural and anthropogenic subsystems of an urbo-ecosystem which could be used as an instrument in the rational management of megalopolises in the frames of their sustainable development. In the development of such a model the authors single out the special example of electromagnetic fields as a universal factor of the anthropogenic influence in urbo-ecosystems. The present publication suggests description and systematization of major properties of an urbo-ecosystem necessary for the development of its adequate dynamic model.

Keywords: active media, urbo-ecosystem, hierarchy, co-evolution, diffusion, tunneling, inhibitor, activator, chirality.