

Название публикации:

Nonlinear concave spiral autowaves in active media, transferring energy, their application in biology and medicine

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Аннотация:

The paper reviews the works devoted to convex spiral autowaves, which are widely known. Recently a new type of autowaves has been discovered - concave autowaves, they propagate from the periphery of active media to the center and are capable of transferring energy. It is proved that concave spiral autowaves can exist in specific inhomogeneous active media. Their existence is confirmed by computational experiments. It is established that concave autowaves are widespread in nature. The article gives a more detailed review of the biological and medical applications of spiral concave autowaves, it is also known that there are many of them in physics, chemistry, hydrodynamics, meteorology, and space. Concave spiral autowaves, carrying energy, are one of the essential tools of self-organization.

Ключевые слова:

Active medium, Biomedical applications of concave spiral waves, Concave spiral autowaves, Convex spiral autowave, Phase waves in vibrational active media