

Oxygen-free combustion—one of the latest ideas of V E Fortov

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A little more than ten years ago, Vladimir E Fortov suggested the possibility of initiating a detonation wave driven by the condensation energy of a supersaturated vapor. Several years later, when this idea was realized and the detonation wave of condensation was experimentally observed and studied, V E Fortov proposed to use this phenomenon for the development of a fundamentally new environmentally friendly energy cycle based on the use of the energy of carbon condensation formed during the pyrolysis of hydrocarbon fuels. In an interview in honor of his seventieth birthday, published in all media, Fortov said that when he resigns from the post of President of the Academy of Sciences and all other administrative posts, he would devote his research to oxygen-free combustion processes that allow obtaining energy from hydrocarbon fuels without emitting carbon dioxide. This lecture will present the stages and prospects for the development of this wonderful idea of V E Fortov, one of his main scientific interests in the last years.