Special Issue

Rotating Detonation Engines

Message from the Guest Editor

Recent years have witnessed a notable increase in endeavors to investigate unsteady combustion processes that offer a prospective increase in stagnation pressure—and therefore fuel efficiency—due to constrained heat release. One such pressure gain combustion (PGC) concept is the rotating detonation engine (RDE). RDEs make use of one or more detonation waves that travel circumferentially about an annular or hollow combustor at kilohertz frequencies, continually combusting the supplied reactants without the need for more than one initial ignition. Due to its simplicity in design, which can be integrated into existing systems—both propulsion and power generation—and the lack of moving mechanical components, RDEs are at the forefront of PGC research. This Special Issue is oriented towards bringing to the fore the state-of-the-art in RDE research. Topics of interest for this Issue include all areas of research pertinent to RDEs, covering experimental, analytical, and numerical studies.

Guest Editor

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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