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## Developments in Propulsion Systems, Advanced Fuels and Injection Systems

Guest Editors:

**Dr. Michele Battistoni**

Department of Engineering,  
University of Perugia, 06123  
Perugia, Italy

**Dr. Chaouki Habchi**

IFP Energies Nouvelles–Digital  
Science and Technology Division,  
1 et 4 avenue de Bois-Préau,  
CEDEX, 92852 Rueil-Malmaison,  
France

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### Message from the Guest Editors

Towards more efficient and cleaner propulsion and land transportation, new gas turbines, liquid-rocket engines, and internal-combustion engines are being designed to operate at very high chamber pressure, often exceeding the injected fuel's critical pressure, or at superheated conditions. In this context, several new complexities are being faced. Real fluid thermodynamics cannot be neglected, as most of the injection processes are actually trans-critical or experiencing nucleation and flash atomization. New fuel mixtures and formulations derived from conventional sources, advanced biomasses processing (such as with ethanol, methanol), or in the form of short-chain synthetic e-fuels generated with renewable energy are also being extensively investigated. Many challenges are then related to acquiring new accurate data describing properties and behavior of these mixtures under a variety of conditions. In addition, fuel injection and mixing are of utmost importance in this scenario, as combustion control is achieved through the injector operation...



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# Special Issue



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### **Prof. Dr. Enrico Sciubba**

Department of Mechanical and  
Aerospace Engineering,  
University of Roma Sapienza, Via  
Eudossiana 18, 00184 Roma, Italy

## Message from the Editor-in-Chief

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*Energies* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

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