



Controversy about Entransy Theory

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PREFACE

The concept of *entransy*, as well as *entransy dissipation*, was proposed in 2003, which was called *heat transport potential capacity* in the early publications. Based on these concepts, the principle of minimum entransy-dissipation-based thermal resistance was developed by means of variation calculus, which has found many applications in heat conduction, convection, thermal radiation and heat exchangers optimization. A number of articles on the entransy theory have been published in IJHM, Energy, Appl. Physics, Phy. Review E, etc.

Entransy concept and approach recently received challenges/criticisms from three papers in J. Heat Transfer and other six papers in Chemical Engineering and Processing: Process Intensification, J. Non-Equilibrium Thermodynamics, Industrial & Engineering Chemistry Research, Energy Conversion and Management, Int. J. Heat and Mass Transfer, and Energy, respectively, and our corresponding replies have been published. In this brochure, we gathered the above mentioned publications against entransy, and our responses to the major points of the criticisms, along with some related papers on the development of entransy, for the reference of interested readers.

We do welcome comments, suggestion, and criticisms, which will push us make more efforts on improving this theory.

Sincerely yours

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(Slightly enlarged and revised edition after IHTC-15)

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