

**BHATTACHARYYA, Souvik**

Indian Institute of Technology, Kharagpur, India

Selected Scholarly Contributions [Data Provided by **SCOPUS**]

[Experimental investigation of transcritical CO<sub>2</sub> heat pump for simultaneous water cooling and heating](#)  
*Thermal Science*, 14 (1), pp. 57-64, 2010.

[Performance of a transcritical CO<sub>2</sub> heat pump for simultaneous water cooling and heating](#)  
*ASHRAE Transactions*, 116 PART 1, pp. 534-541, 2010.

[Thermodynamic analyses and optimization of a transcritical N<sub>2</sub>O refrigeration cycle](#)  
*International Journal of Refrigeration*, 33 (1), pp. 33-40, 2010.

[Exergy assessment of an optimized capillary tube-based transcritical CO<sub>2</sub> heat pump system](#)  
*International Journal of Energy Research*, 33 (14), pp. 1278-1289, 2009.

[A three-region conduction-controlled rewetting analysis by the Heat Balance Integral Method](#)  
*International Journal of Thermal Sciences*, 48 (11), pp. 2100-2107, 2009.

[How good is goodman's heat-balance integral method for analyzing the rewetting of hot surfaces?](#)  
*Thermal Science*, 13 (2), pp. 97-112, 2009.

[Optimization of recompression S-CO<sub>2</sub> power cycle with reheating](#)  
*Energy Conversion and Management*, 50 (8), pp. 1939-1945, 2009.

[Thermodynamic analysis and optimization of a novel N<sub>2</sub>O-CO<sub>2</sub> cascade system for refrigeration and heating](#)  
*International Journal of Refrigeration*, 32 (5), pp. 1077-1084, 2009.

[Assessment of blends of CO<sub>2</sub> with butane and isobutane as working fluids for heat pump applications](#)  
*International Journal of Thermal Sciences*, 48 (7), pp. 1460-1465, 2009.

[A transcritical CO<sub>2</sub> heat pump for simultaneous water cooling and heating: Test results and model validation](#)  
*International Journal of Energy Research*, 33 (1), pp. 100-109, 2009.

[Irreversibility minimization of heat exchangers for transcritical CO<sub>2</sub> systems](#)  
*International Journal of Thermal Sciences*, 48 (1), pp. 146-153, 2009.

[Analysis and optimization of an ammonia based transcritical rankine cycle for power generation](#)  
*American Society of Mechanical Engineers, Power Division (Publication) PWR*, pp. 673-677, 2008.

[CO<sub>2</sub>-C<sub>3</sub>H<sub>8</sub> cascade refrigeration-heat pump system: Heat exchanger inventory optimization and its numerical verification](#)  
*International Journal of Refrigeration*, 31 (7), pp. 1207-1213, 2008.

[Homogeneous versus separated two phase flow models: Adiabatic capillary tube flow in a transcritical CO<sub>2</sub> heat pump](#)  
*International Journal of Thermal Sciences*, 47 (11), pp. 1555-1562, 2008.

[Parametric study of a capillary tube-suction line heat exchanger in a transcritical CO<sub>2</sub> heat pump cycle](#)  
*Energy Conversion and Management*, 49 (11), pp. 2979-2985, 2008.

[Effect of geometric parameters on steady-state performance of single-phase NCL with heat loss to ambient](#)  
*International Journal of Thermal Sciences*, 47 (10), pp. 1359-1373, 2008.

[Thermodynamic optimization of irreversible heat pumps](#)  
*Archives of Thermodynamics*, 29 (3), pp. 59-68, 2008.

[Rewetting analysis of hot surfaces with internal heat source by the heat balance integral method](#)  
*Heat and Mass Transfer/Waerme- und Stoffuebertragung*, 44 (10), pp. 1247-1256, 2008.

[Feedback linearization based control of a variable air volume air conditioning system for cooling applications](#)  
*ISA Transactions*, 47 (3), pp. 339-349, 2008.

Optimized transcritical CO<sub>2</sub> heat pumps: Performance comparison of capillary tubes against expansion valves  
*International Journal of Refrigeration*, 31 (3), pp. 388-395, 2008.

Performance evaluation of a non-adiabatic capillary tube in a transcritical CO<sub>2</sub> heat pump cycle  
*International Journal of Thermal Sciences*, 47 (4), pp. 423-430, 2008.

Nonlinear control of VAVAC system via feedback linearization  
*IECON Proceedings (Industrial Electronics Conference)*, pp. 845-850, 2007.

Adiabatic capillary tube flow of carbon dioxide in a transcritical heat pump cycle  
*International Journal of Energy Research*, 31 (11), pp. 1016-1030, 2007.

Non-adiabatic capillary tube flow of carbon dioxide in a transcritical heat pump cycle  
*Energy Conversion and Management*, 48 (9), pp. 2491-2501, 2007.

Effect of heat loss to ambient on steady-state behaviour of a single-phase natural circulation loop  
*Applied Thermal Engineering*, 27 (8-9), pp. 1432-1444, 2007.

Erratum to "Simulation of a transcritical CO<sub>2</sub> heat pump cycle for simultaneous cooling and heating applications" [Int. J. Refrigeration 29 (2006) 735-743] (DOI:10.1016/j.ijrefrig.2005.12.006)  
*International Journal of Refrigeration*, 30 (4), p. 744, 2007.

Exergy maximization of cascade refrigeration cycles and its numerical verification for a transcritical CO<sub>2</sub>-C<sub>3</sub>H<sub>8</sub> system  
*International Journal of Refrigeration*, 30 (4), pp. 624-632, 2007.

Prediction of enthalpy of formation and Gibbs energy change in pseudo-binary (Ti-Zr)(Fe-Cr)<sub>2</sub> and pseudo-ternary (Ti-Zr)(Fe-Cr)<sub>2</sub>-H system using extended Miedema model  
*Journal of Materials Science*, 42 (10), pp. 3645-3650, 2007.

Analytical minimization of overall conductance and heat transfer area in refrigeration and heat pump systems and its numerical confirmation  
*Energy Conversion and Management*, 48 (4), pp. 1245-1250, 2007.

Overall conductance and heat transfer area minimization of refrigerators and heat pumps with finite heat reservoirs  
*Energy Conversion and Management*, 48 (3), pp. 803-808, 2007.

Optimization of two-stage transcritical carbon dioxide heat pump cycles  
*International Journal of Thermal Sciences*, 46 (2), pp. 180-187, 2007.

Studies on a two-stage transcritical carbon dioxide heat pump cycle with flash intercooling  
*Applied Thermal Engineering*, 27 (2-3), pp. 299-305, 2007.

Natural refrigerant-based subcritical and transcritical cycles for high temperature heating  
*International Journal of Refrigeration*, 30 (1), pp. 3-10, 2007.