

## 2015 Publications of UNLV's Center for Energy Research

**R. Boehm**, H. Yang, J. Yan, "Chapter I.1.1. Introduction: Renewable energy," in *Handbook of Clean Energy Systems*, (J. Yan, Editor in Chief), Wiley, 3-8 (2015).

**R. Boehm**, "Chapter I.4.16 Brief introduction to solar energy utilization," in *Handbook of Clean Energy Systems*, (J. Yan, Editor in Chief), Wiley, pp. 265-282 (2015).

**R. Boehm**, "Chapter I.4.21 Solar water heating," in *Handbook of Clean Energy Systems*, (J. Yan, Editor in Chief), Wiley, pp. 335-354 (2015).

T.-C. Hung, H.-C. Chen, D.-S. Lee, H.-H. Fu, **Y. Chen**, G.-P. Yu, "Optimal design of a concentric heat exchanger for high-temperature systems using CFD simulations," *Applied Thermal Engineering*, **75**, 700-708 (2015). doi: <https://doi.org/10.1016/j.applthermaleng.2014.09.079>

T. K. Kim, B. VanSaders, **J. Moon**, T. Kim, C. H. Liu, J. Khamwannah, D. W. Chun, D. Y. Choi, A. Kargar, R. K. Chen, Z. W. Liu, and S. H. Jin, "Tandem structured spectrally selective coating layer of copper oxide nanowires combined with cobalt oxide nanoparticles." *Nano Energy* **11**, 247-59 (2015). doi: <https://doi.org/10.1016/j.nanoen.2014.10.018>

X. Lu, C. Zhang, **Y. Chen**, Q. Wang, M. Zeng, "Effect of geometrical parameters on flow and heat transfer performances in multi-stream spiral-wound heat exchangers," *Applied Thermal Engineering*, **89**, 1104-1116 (2015). doi: <https://doi.org/10.1016/j.applthermaleng.2015.04.084>

T. Ma, J. Zhang, S. Borjigin, **Y. Chen**, Q. Wang, M. Zeng, "Numerical study on small-scale longitudinal heat conduction in cross-wavy primary surface heat exchanger," *Applied Thermal Engineering*, **76**, 272-282 (2015). doi: <https://doi.org/10.1016/j.applthermaleng.2014.11.026>

T. Ma, F. Xin, L. Li, X.-Y. Xu, **Y. Chen**, Q. Wang, Qiuwang, "Effect of fin-endwall fillet on thermal hydraulic performance of airfoil printed circuit heat exchanger," *Applied Thermal Engineering*, **89**, 1087-095 (2015). doi: <https://doi.org/10.1016/j.applthermaleng.2015.04.022>

T. Ma, L. Li, X.-Y. Xu, **Y. Chen**, Q. Wang, "Study on local thermal-hydraulic performance and optimization of zigzag-type printed circuit heat exchanger at high temperature," *Energy Conversion and Management*, **104**, 55-66 (2015). <https://doi.org/10.1016/j.enconman.2015.03.016>

**J. Moon**, T. K. Kim, B. VanSaders, C. Choi, Z. Liu, S. Jin, and R. Chen, "Black oxide nanoparticles as durable solar absorbing material for high temperature concentrating solar power system," *Solar Energy Materials & Solar Cells* **134**, 417- 424 (2015). doi: <https://doi.org/10.1016/j.solmat.2014.12.004>

V. Nagarajan, **Y. Chen**, Q. Wang, T. Ma, "CFD modeling and simulation of sulfur trioxide decomposition in ceramic plate fin high temperature heat exchanger and decomposer," *International Journal of Heat and Mass Transfer*, **80**, 329-343 (2015). doi: <https://doi.org/10.1016/j.ijheatmasstransfer.2014.09.005>

V. Nagarajan, **Y. Chen**, Q. Wang, T. Ma, Ting, "Numerical analysis of fluid flow and heat transfer for ceramic plate fin high temperature heat exchanger, Part I: fin designs," *Renewable Energy and Sustainable Development*, **1**(1), 89-97 (2015).

V. Nagarajan, **Y. Chen**, Q. Wang, T. Ma, Ting, "Numerical analysis of fluid flow and heat transfer for ceramic plate fin high temperature heat exchanger, Part II: fin arrangements" *Renewable Energy and Sustainable Development*, **1**(1), 98-105 (2015).

T. Tan, **Y. Chen**, Z. Chen, "Parametric study on the performance of a solid particle solar receiver," *Solar Energy*, **120**, 277-286 (2015). doi: <https://doi.org/10.1016/j.solener.2015.01.029>

X.-Y. Xu, Q. Wang, L. Li, **Y. Chen**, T. Ma, "Study on thermal resistance distribution and local heat transfer enhancement method for SCO<sub>2</sub>-water heat exchange process near pseudo-critical temperature," *International Journal of Heat and Mass Transfer*, **82**, 179-188 (2015). doi: <https://doi.org/10.1016/j.ijheatmasstransfer.2014.11.029>