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Research Area P1.1	Publication Title + Authors + Full Citation + DOI
P1.1 Heliostats	A feasibility study on the application of mesh grids for heliostat wind load reduction Matthew Emes, Azadeh Jafari, Maziar Arjomandi (2022) Solar Energy 240, 121-130. https://doi.org/10.1016/j.solener.2022.05.033

Research Area P1.2	Publication Title + Authors + Full Citation + DOI
P1.2 Sodium Receiver End May 2022	Exploring efficiency limits for molten salt and sodium external cylindrical receivers for third-generation concentrating solar power Charles-Alexis Asselineau, John Pye, Joe Coventry (2022) Solar Energy, Volume 240, Pages 354-375, https://doi.org/10.1016/j.solener.2022.05.001
	Highly efficient and durable solar thermal energy harvesting via scalable hierarchical coatings inspired by stony corals, Juan Felipe Torres, Kaoru Tsuda, Yasushi Murakami, Yifan Guo, Sahar Hosseini, Charles-Alexis Asselineau, Mahdiar Taheri, Kurt Drewes, Antonio Tricoli, Wojciech Lipiński, Joe Coventry (2022) Energy & Environmental Science, https://doi.org/10.1039/D1EE03028K
	Long-term thermal stability and failure mechanisms of Pyromark 2500 for high-temperature solar thermal receivers Sahar Hosseini, Juan Felipe Torres, Mahdiar Taheri, Antonio Tricoli, Wojciech Lipiński, Joe Coventry (2022) Solar Energy Materials and Solar Cells, 246:111898, https://doi.org/10.1016/j.solmat.2022.111898
	In Handbook on Solar Thermal Technologies, Concentrating Solar Power and Fuels. Chapter 5: Solar Thermal Receivers J. Coventry, J. Pye (2022) Edited by C.K. Ho and J.H. Davidson, World Scientific Series on Emerging Technologies – Volume 3, 2022 https://doi.org/10.1142/9789811249808_0005

Research Area P1.4	Publication Title + Authors + Full Citation + DOI
P1.4 Particle Receiver End Aug 2021	The dominant underlying parameters controlling the dispersion of falling particle curtains Nima Sedaghatizadeh, Maziar Arjomandi, Timothy Lau. Graham Nathan. (2022) Powder Technology 402, 117343, https://doi.org/10.1016/j.powtec.2022.117343

Research Area P1.7	Publication Title + Authors + Full Citation + DOI
P1.7 Particle Receiver	Heat transfer in directly-irradiated high-temperature solid--gas flows laden with polydisperse particles Jingjing Chen, Apurv Kumar, Joe Coventry, Wojciech Lipiński (2022) Applied Mathematical Modelling, Vol. 110, Pages 698-722, https://doi.org/10.1016/j.apm.2022.05.034
	High-temperature optical and radiative properties of alumina–silica-based ceramic materials for solar thermal applications Jingjing Chen, Sahar Hosseini, Juan Felipe Torres, Apurv Kumar, Joe Coventry, Wojciech Lipiński (2022) Solar Energy Materials and Solar Cells, Vol. 242 Pages 111710, https://doi.org/10.1016/j.solmat.2022.111710
	Discrete particle modelling of buoyant convective particle-laden air flow in solar cavity free-falling particle receivers Sahan Trushad Wickramasooriya Kuruneru, Jin-Soo Kim, Yen Chean Soo Too, Daniel Potter (2022) Energy Reports, Volume 8, November 2022, Pages 3902-3918, https://doi.org/10.1016/j.egyr.2022.03.034

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Research Area P2.2	Publication Title + Authors + Full Citation + DOI
P2.2 Heat Exchangers End Dec 2021	Impact of different types of channels on Thermo-hydraulic performance of a sodium-sCO2 Printed circuit heat exchanger for supercritical Brayton cycle applications S Riahi, M Belusko, T Lau, R Flewell-Smith, M Evans, F Bruno (2022) Applied Thermal Engineering, Volume 216, 5 Nov 2022, 119098, https://doi.org/10.1016/j.applthermaleng.2022.119098
	Hydrothermal Assessment of Different Configurations for a High Temperature sodium-sCO_2 Printed Circuit Heat Exchanger Riahi, S., Belusko, M., Lau, T., Flewell-Smith, R., Evans, M., Bruno, F. (2022) (Under Review), International Journal of Heat and Mass Transfer

Research Area P2.3	Publication Title + Authors + Full Citation + DOI
P2.3 Storage Technology Options End Feb 2022	Development of a packed bed thermal energy storage prototype with sodium as the heat transfer fluid Joe Coventry, Juan F. Torres, Zebedee Kee, Mehdi Vahabzadeh Bozorg, Mahdiar Taheri, Ahmad Mojiri, John Pye, Stuart Bell, Geoffrey Will, Ted Steinberg (2022) SolarPACES 27-30 September, Albuquerque, NM, USA.

Research Area P2.5	Publication Title + Authors + Full Citation + DOI
P2.5 Thermal Energy Storage (TES) Systems	Sensitivity study of solid media thermal energy storage configurations for concentrated solar power systems Yen Chean Soo Too (2022) SolarPACES 27-30 September, Albuquerque, NM, USA.
	Thermal energy storage in graphite: results of testing in a high-temperature sodium loop Joe Coventry, Apurv Kumar, Ahmad Mojiri, John Pye, Mahdiar Taheri, Ye Wang, Casey Walsh (2022) SolarPACES 27-30 September, Albuquerque, NM, USA.
	Industrial process heat through competitive renewable electricity via thermal energy storage in a current energy market Geoff Drewer (2022) APSRC 29 Nov-1 Dec, Newcastle, Australia.

Research Area P3.4	Publication Title + Authors + Full Citation + DOI
P3.4 Power Block End Aug 2021	Review of Analytical Studies of Melting Rate Enhancement with Fin and/or Foam Inserts C.R. Zhao, M. Opolot, M. Liu, J. Wang, F. Bruno, S. Mancin, K. Hooman. (2022) Applied Thermal Engineering, Volume 207, 5 May 2022, 118154, https://doi.org/10.1016/j.applthermaleng.2022.118154
	A review of high temperature (≥ 500 °C) latent heat thermal energy storage Opolot, Michael & Zhao, Chunrong & Liu, Ming & Mancin, Simone & Bruno, Frank & Hooman, Kamel, (2022) Renewable and Sustainable Energy Reviews, Elsevier, vol. 160(C), DOI: 10.1016/j.rser.2022.112293
	The applicability of volume-averaging method to simulate melting in a multi-scaled periodic structure Zhao, C., Sun, Y., Wang, J., Hooman, K. (2022) Energy Volume 248, 1 June 2022, 123636, https://doi.org/10.1016/j.energy.2022.123636

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Research Area P3.4	Publication Title + Authors + Full Citation + DOI
	Fin design optimization to enhance PCM melting rate inside a rectangular enclosure Zhao, C., Wang, J., Sun, Y., He, S., Hooman, K. (2022) Applied Energy, Volume 321, 1 September 2022, 119368, https://doi.org/10.1016/j.apenergy.2022.119368
	Periodic structures for melting enhancement: observation of critical cell size and localized melting Chunrong Zhao, Michael Opolot, Ming Liu, Ji Wang, Frank Bruno, Simone Mancin, Kamel Hooman (2022) International Journal of Heat and Mass Transfer, Volume 195, October 2022, 123107, https://doi.org/10.1016/j.ijheatmasstransfer.2022.123107
	Experimental and Numerical Analysis for the Discharge Performance of a High Temperature Phase Change Material with Low-Cost Wire Mesh. Opolot, Michael and Zhao, Chunrong and Keane, Partrick F. and Liu, Ming and Mancin, Simone and Bruno, Frank and Hooman, Kamel, (2022) Available at SSRN: https://ssrn.com/abstract=4081774 or http://dx.doi.org/10.2139/ssrn.4081774

Research Area P4.3	Publication Title + Authors + Full Citation + DOI
P4.3 Photocatalysis	A Review of State of the Art in Phosphine Ligated Gold Clusters and Application in Catalysis Rohul H. Adnan, Jenica Marie L. Madridejos, Abdulrahman S. Alotabi, Gregory F. Metha, Gunther G. Andersson (2022) Advanced Science Volume9, Issue15, May 25, 2022, 2105692, https://doi.org/10.1002/advs.202105692
	Suppression of phosphine-protected Au_9 cluster agglomeration on $SrTiO_3$ particles using a chromium hydroxide layer Abdulrahman S. Alotabi, D. J. Osborn, Shuhei Ozaki, Yuki Kataoka, Yuichi Negishi, Siriluck Tesana, Gregory F. Metha, Gunther G. Andersson (2022) Materials Advances, Issue 8, 2022, https://doi.org/10.1039/D1MA01226F
	Factors influencing catalytic activity of size-specific triphenylphosphine- ligated gold nanoclusters in the electrocatalytic hydrogen evolution reaction Mousavi, Hanieh; Yin, Yanting; Sharma, Shailendra; Gibson, Christopher; Golovko, Vladimir; Andersson, Gunther; Shearer, Cameron; Metha, Gregory (2022) The Journal of Physical Chemistry C 126 (2022) 246-260, DOI: 10.1021/acs.jpcc.1c08924
	Effect of TiO2 Film Thickness on the Stability of Au9 Clusters with a CrOx layer A. Alotabi, Y. Yanting, A. Redaa, T. Siriluck, G.F. Metha, G. Andersson (2022) Nanomaterials, 12, 3218 (2022), doi.org/10.3390/nano12183218
	Graphene Bridge for Photocatalytic Hydrogen Evolution with Gold Nanocluster Co-catalysts H. Mousavi, D. Small, S. Sharma, V. Golovko, G. Andersson, C. Shearer, G.F. Metha (2022) Nanomaterials; 12, 3638, 2022, doi.org/10.3390/nano12203638

Research Area P4.4	Publication Title + Authors + Full Citation + DOI
P4.4 SDFB End Jun 2021	Agglomeration of Olivine with Potassium- or Silicon-Rich Agricultural Residues Under Conditions Relevant to Dual Fluidized Bed Gasification Gule. Li, Graham J. Nathan, Matthias Kuba, Nils Skoglund, Peter J. Ashman, Woei L. Saw (2022) Energy Fuels 2022, 36, 23, 14253–14266, Publication Date: November 16, 2022, https://doi.org/10.1021/acs.energyfuels.2c02286
	Calcite or Kaolinite Addition for Mitigating Bed Agglomeration during Combustion and Steam Gasification of Potassium-Rich Agricultural Residues with Olivine as the Bed Material Gule. Li, Graham J. Nathan, Matthias Kuba, Peter J. Ashman, and Woei L. Saw (2022) Energy Fuels 2022, 36, 23, 14267–14280, Publication Date:November 17, 2022, https://doi.org/10.1021/acs.energyfuels.2c02326

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Research Area P4.5	Publication Title + Authors + Full Citation + DOI
P4.5 Decarbonisation of Steelmaking End Dec 2021	Solar-thermal beneficiation of iron ore: System-level dynamic simulation and techno-economic optimization A Rahbari, A Fontalvo and J Pye (2022) Applied Thermal Engineering, 223: 119794, https://doi.org/10.1016/j.applthermaleng.2022.119794

Research Area P4.9	Publication Title + Authors + Full Citation + DOI
P4.9 Commercial Application of STEM Technologies continuation	N/A

Research Area P5.3	Publication Title + Authors + Full Citation + DOI
P5.3 Advanced Materials	Corrosion mechanism of SS316L exposed to NaCl/Na2CO3 molten salt in air and argon environments Bell, S., Jones, M.W.M., Graham, E., Peterson, D.J., van Riesen, G.A., Hinsley, G., Will, G., Steinberg, T. A. (2022) Corrosion Science, Vol 195, Feb. 20222, https://doi.org/10.1016/j.corsci.2021.109966
	Critical components in supercritical CO2 Brayton cycle power blocks for solar power systems: Degradation mechanisms and failure consequences Salar Delkasar Maher, Madjid Sarvghad, Rene Olivares, Teng-Cheong Ong, Geoffrey Will, Theodore A. Steinberg (2022) Solar Energy Materials and Solar Cells, Volume 242, 1 August 2022, 111768, https://doi.org/10.1016/j.solmat.2022.111768
	Dissimilar weld failure: A forensic analysis to determine primary failure mechanisms Yanting Yin, Raihan Rumman, Madjid Sarvghad, Stuart Bell, Geoffrey Will, Richard E. Clegg, Egon Perilli, Sophie Rapagna, David A. Lewis, Theodore A. Steinberg, Gunther G. Andersson (2022) Engineering Failure Analysis, Volume 139, September 2022, 106453, https://doi.org/10.1016/j.engfailanal.2022.106453
	Investigation of the corrosion of electro-less nickel-plated alloys in molten salt and its effect on phase change properties for energy storage applications Teng Cheong Ong, Madjid, Sarvghad, Kaleb Lippiatt, Stuart Bell, Geoffrey Will, Theodore A. Steinberg, (2022) Solar Energy, Vol 236, 1 April 2022, Pages 512-521, doi.org/10.1016/j.solener.2022.03.030
	C-276 nickel alloy corrosion in eutectic Na2CO3/NaCl molten salt under isothermal and thermal cycling conditions Stuart Bell, Mitchell de Bruyn, Ted Steinberg, Geoffrey Will, (2022) Solar Energy Materials and Solar Cells, Vol 240, 15 June 2022, doi.org/10.1016/j.solmat.2022.111695
	Investigation of the corrosion of electro-less nickel-plated alloys in molten salt and its effect on phase change properties for energy storage applications Ong, T.C., Bell, S., Will, G., Moghaddam, M.J., Steinberg, T.A., (2022) Solar Energy, Vol 236, April 2022, doi.org/10.1016/j.solener.2022.03.030
	Role of Headspace Environment for Phase Change Carbonates on the Corrosion of Stainless Steel 316L: High Temperature Thermal Storage Cycling in Concentrated Solar Power Plants Y. Yin, R. Rumman, M. Sarvghad, S. Bell, T-C. Ong, R. Jacob, M. Liu , R. Flewell-Smith, S.Sheoran, J. Severino, M. Belusko, F. Bruno, G. Will, T. A. Steinberg, D.A. Lewis, G.G. Andersson, (2022) SOLMAT, Solar Energy Materials and Solar Cells, Volume 251, March 2023, 112170, https://doi.org/10.1016/j.solmat.2022.112170
	On the Compatibility of Liquid Sodium as Heat Transfer Fluid for Advanced Concentrated Solar Thermal Energy Systems T. C. Ong, S. Bell, R. Rumman, S. D. Maher, J. W. Woodcock, G. Will, G. G. Andersson, D. A. Lewis, T. A. Steinberg, (2022) SOLMAT, Solar Energy Materials and Solar Cells, Volume 246, 1 October 2022, 111897, 10.1016/j.solmat.2022.111897

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Research Area P5.3	Publication Title + Authors + Full Citation + DOI
	Dissimilar Weld Failure: A Forensic Analysis to Determine Primary Failure Mechanisms Y. Yin; R. Rumman; M.Sarvghad; S. Bell; G. Will; R. Clegg; E. Perilli; S. Rapagna; D. A. Lewis; T. A. Steinberg, G.A. Andersson (2022) Engineering Failure Analysis, Volume 139, September 2022, 106453, https://doi.org/10.1016/j.engfailanal.2022.106453

Research Area P5.4	Publication Title + Authors + Full Citation + DOI
P5.4 O + M	Model-predictive control for dispatch planning of concentrating solar power plants under real-time spot electricity prices. Mohammadzadeh, N., Truong-Ba, H., Cholette, M. E., Steinberg, T. A., & Manzolini, G. (2022). Solar Energy, 248, 230–250, https://doi.org/https://doi.org/10.1016/j.solener.2022.09.020
	Dynamic thermal analysis and creep-fatigue lifetime assessment of solar tower external receivers. Gentile, G., Picotti, G., Binotti, M., Cholette, M. E., & Manzolini, G. (2022). Solar Energy, 247, 408-431, https://doi.org/10.1016/j.solener.2022.10.010

Research Area P6.2	Publication Title + Authors + Full Citation + DOI
P6.2 Opportunity Assessment End Jun 2021	Techno-economic assessment of application of particle-based concentrated solar thermal systems in Australian industry Andrew Beath, Mehdi Aghaei Meybodi, and Geoffrey Drewer (2022) Journal of Renewable and Sustainable Energy 14, 033702 (2022), https://doi.org/10.1063/5.0086655