

REFERENCES

- Alam, H., & Ramakrishna, S. (2013). A review on the enhancement of figure of merit from bulk to nano-thermoelectric materials. *Nano Energy*, *2*(2), 190–212.
- Ali, M., Knowles, K. M., Mallinson, P. M., & Fernie, J. A. (2015). Microstructural evolution and characterisation of interfacial phases in $\text{Al}_2\text{O}_3/\text{Ag-Cu-Ti}/\text{Al}_2\text{O}_3$ braze joints. *Acta Materialia*, *96*, 143–158.
- Arai, K., Matsubara, M., Sawada, Y., Sakamoto, T., Kineri, T., Kogo, Y., ... & Nishio, K. (2012). Improvement of electrical contact between TE material and Ni electrode interfaces by application of a buffer layer. *Journal of electronic materials*, *41*(6), 1771.
- Bhaskar, A., Liu, C. J., Yuan, J. J., & Chang, C. L. (2013). Thermoelectric properties of n-type $\text{Ca}_{1-x}\text{Bi}_x\text{Mn}_{1-y}\text{Si}_y\text{O}_{3-\delta}$ ($x = y = 0.00, 0.02, 0.03, 0.04, \text{ and } 0.05$) system. *Journal of Alloys and Compounds*, *552*, 236–239.
- Bocher, L. (2009). *Synthesis, structure, microstructure, and thermoelectric properties of perovskite-type manganate phases*. Augsburg, Univ., Diss., 2009.
- Bocher, L., Aguirre, M. H., Logvinovich, D., Shkabko, A., Robert, R., Trottmann, M., & Weidenkaff, A. (2008). $\text{CaMn}_{1-x}\text{Nb}_x\text{O}_3$ ($x \leq 0.08$) Perovskite-Type Phases As Promising New High-Temperature n-Type Thermoelectric Materials. *Inorganic chemistry*, *47*(18), 8077–8085.
- Choi, S. M., Lee, K. H., Lim, C. H., & Seo, W. S. (2011). Oxide-based thermoelectric power generation module using p-type $\text{Ca}_3\text{Co}_4\text{O}_9$ and n-type $(\text{ZnO})_7\text{In}_2\text{O}_3$ legs. *Energy Conversion and Management*, *52*(1), 335–339.
- Cho, J. Y., Kwon, O. J., Chung, Y. K., Kim, J. S., Kim, W. S., Song, K. J., & Park, C. (2015). Effect of Trivalent Bi Doping on the Seebeck Coefficient and Electrical Resistivity of $\text{Ca}_3\text{Co}_4\text{O}_9$. *Journal of Electronic Materials*, *44*(10), 3621.

- Coey, J. M. D., Viret, M. V., & Von Molnar, S. (2009). Mixed-valence manganites. *Advances in physics*, 58(6), 571–697.
- Constantinescu, G., Rasekh, S., Torres, M. A., Diez, J. C., Madre, M. A., & Sotelo, A. (2013). Effect of Sr substitution for Ca on the $\text{Ca}_3\text{Co}_4\text{O}_9$ thermoelectric properties. *Journal of Alloys and Compounds*, 577, 511–515.
- Elsheikh, M. H., Shnawah, D. A., Sabri, M. F. M., Said, S. B. M., Hassan, M. H., Bashir, M. B. A., & Mohamad, M. (2014). A review on thermoelectric renewable energy: Principle parameters that affect their performance. *Renewable and Sustainable Energy Reviews*, 30, 337–355.
- Fergus, J. W. (2012). Oxide materials for high temperature thermoelectric energy conversion. *Journal of the European Ceramic Society*, 32(3), 525–540.
- Funahashi, R., Matsubara, I., Ikuta, H., Takeuchi, T., Mizutani, U., & Sodeoka, S. (2000). An oxide single crystal with high thermoelectric performance in air. *Japanese Journal of Applied Physics*, 39(11B), L1127.
- Funahashi, R., Urata, S., Mizuno, K., Kouuchi, T., & Mikami, M. (2004). $\text{Ca}_{2.7}\text{Bi}_{0.3}\text{Co}_4\text{O}_9/\text{La}_{0.9}\text{Bi}_{0.1}\text{NiO}_3$ thermoelectric devices with high output power density. *Applied physics letters*, 85(6), 1036–1038.
- Funahashi, R., Mikami, M., Mihara, T., Urata, S., & Ando, N. (2006). A portable thermoelectric–power–generating module composed of oxide devices.
- Fu, W., Song, X. G., Hu, S. P., Chai, J. H., Feng, J. C., & Wang, G. D. (2015). Brazing copper and alumina metallized with Ti-containing $\text{Sn}_{0.3}\text{Ag}_{0.7}\text{Cu}$ metal powder. *Materials & Design*, 87, 579–585.
- Goudarzi, A. M., Mazandarani, P., Panahi, R., Behsaz, H., Rezanian, A., & Rosendahl, L. A. (2013). Integration of thermoelectric generators and wood stove to produce heat, hot water, and electrical power. *Journal of electronic materials*, 42(7), 2127–2133.
- Handbook, T. (2006). Macro to Nano, edited by DM Rowe. *CRC Taylor & Francis, Boca Ratcon*.

- He, J., Liu, Y., & Funahashi, R. (2011). Oxide thermoelectrics: The challenges, progress, and outlook. *Journal of Materials Research*, 26(15), 1762–1772.
- Hsu, K. F., Loo, S., Guo, F., Chen, W., Dyck, J. S., Uher, C., ... & Kanatzidis, M. G. (2004). Cubic $\text{AgPb}_m\text{SbTe}_{2+m}$: bulk thermoelectric materials with high figure of merit. *Science*, 303(5659), 818–821.
- Huang, X. Y., Miyazaki, Y., & Kajitani, T. (2008). High temperature thermoelectric properties of $\text{Ca}_{1-x}\text{Bi}_x\text{Mn}_{1-y}\text{V}_y\text{O}_{3-\delta}$ ($0 \leq x = y \leq 0.08$). *Solid State Communications*, 145(3), 132–136.
- Kabir, R., Zhang, T., Donelson, R., Wang, D., Tian, R., Tan, T. T., ... & Li, S. (2014). Thermoelectric properties of Yb and Nb codoped CaMnO_3 . *physica status solidi (a)*, 211(5), 1200–1206.
- Kabir, R., Zhang, T., Wang, D., Donelson, R., Tian, R., Tan, T. T., & Li, S. (2014). Improvement in the thermoelectric properties of CaMnO_3 perovskites by W doping. *Journal of Materials Science*, 49(21), 7522–7528.
- Kabir, R., Tian, R., Zhang, T., Donelson, R., Tan, T. T., & Li, S. (2015). Role of Bi doping in thermoelectric properties of CaMnO_3 . *Journal of Alloys and Compounds*, 628, 347–351.
- Lemonnier, S., Guilmeau, E., Goupil, C., Funahashi, R., & Noudem, J. G. (2010). Thermoelectric properties of layered $\text{Ca}_{3.95}\text{RE}_{0.05}\text{Mn}_3\text{O}_{10}$ compounds (RE= Ce, Nd, Sm, Eu, Gd, Dy). *Ceramics International*, 36(3), 887–891.
- Lin, Y., Sun, S., Zhang, Q., Shen, H., Shao, Q., Wang, L., ... & Jiang, W. (2016). Preparation of AgNPs/ $\text{Ca}_3\text{Co}_4\text{O}_9$ nanocomposites with enhanced thermoelectric performance. *Materials Today Communications*, 6, 44–49.
- Loland, T. E. (2014). *Thermoelectric Properties of A-site Deficient Lanthanum Substituted Strontium Titanate* (Master's thesis, Institutt for materialteknologi).

- Lotgering, F. K. (1959). Topotactical reactions with ferrimagnetic oxides having hexagonal crystal structures. *Journal of Inorganic and Nuclear Chemistry*, 9(2), 113–123.
- Lowhorn, N. D., Wong–Ng, W., Lu, Z. Q., Martin, J., Green, M. L., Bonevich, J. E., ... & Sharp, J. (2011). Development of a Seebeck coefficient Standard Reference Material™. *Journal of materials research*, 26(15), 1983–1992.
- Matsubara, I., Funahashi, R., Takeuchi, T., Sodeoka, S., Shimizu, T., & Ueno, K. (2001). Fabrication of an all–oxide thermoelectric power generator. *Applied Physics Letters*, 78(23), 3627–3629.
- Masset, A. C., Michel, C., Maignan, A., Hervieu, M., Toulemonde, O., Studer, F., ... & Hejtmanek, J. (2000). Misfit–layered cobaltite with an anisotropic giant magnetoresistance: $\text{Ca}_3\text{Co}_4\text{O}_9$. *Physical Review B*, 62(1), 166.
- Meyers, H. P., & Myers, H. P. (1997). *Introductory solid state physics*. CRC press.
- Min, G., Rowe, D. M., & Kontostavakis, K. (2004). Thermoelectric figure–of–merit under large temperature differences. *Journal of Physics D: Applied Physics*, 37(8), 1301.
- Miyazaki, Y., Onoda, M., Oku, T., Kikuchi, M., Ishii, Y., Ono, Y., ... & Kajitani, T. (2002). Modulated structure of the thermoelectric compound $[\text{Ca}_2\text{CoO}_3]_{0.62}\text{CoO}_2$. *Journal of the Physical Society of Japan*, 71(2), 491–497.
- Molinari, M., Tompsett, D. A., Parker, S. C., Azough, F., & Freer, R. (2014). Structural, electronic and thermoelectric behaviour of CaMnO_3 and $\text{CaMnO}_{(3-\delta)}$. *Journal of Materials Chemistry A*, 2(34), 14109–14117.
- Muguerra, H., Rivas–Murias, B., Traianidis, M., Marchal, C., Vanderbemden, P., Vertruyen, B., ... & Cloots, R. (2011). Thermoelectric properties of n–type $\text{Ca}_{1-x}\text{Dy}_x\text{Mn}_{1-y}\text{Nb}_y\text{O}_{3-\delta}$ compounds ($x= 0, 0.02, 0.1$ and $y= 0, 0.02$) prepared by spray–drying method. *Journal of Alloys and Compounds*, 509(29), 7710–7716.

- Ohtaki, M., Koga, H., Tokunaga, T., Eguchi, K., & Arai, H. (1995). Electrical Transport Properties and High-Temperature Thermoelectric Performance of $(\text{Ca}_{0.9}\text{M}_{0.1})\text{MnO}_3$ (M= Y, La, Ce, Sm, In, Sn, Sb, Pb, Bi). *Journal of Solid State Chemistry*, 120(1), 105–111.
- Ohta, H., Sugiura, K., & Koumoto, K. (2008). Recent progress in oxide thermoelectric materials: p-type $\text{Ca}_3\text{Co}_4\text{O}_9$ and n-type SrTiO_3 -. *Inorganic chemistry*, 47(19), 8429–8436.
- Ohtaki, M., Tokunaga, T., Eguchi, K., & Arai, H. (1997, August). Hopping carrier mobilities and thermoelectric properties of oxide materials with perovskite-related structure. In *Thermoelectrics, 1997. Proceedings ICT'97. XVI International Conference on* (pp. 224–227). IEEE.
- Ohtaki, M. (2011). Recent aspects of oxide thermoelectric materials for power generation from mid-to-high temperature heat source. *Journal of the Ceramic Society of Japan*, 119(1395), 770–775.
- O'Shaughnessy, S. M., Deasy, M. J., Kinsella, C. E., Doyle, J. V., & Robinson, A. J. (2013). Small scale electricity generation from a portable biomass cookstove: Prototype design and preliminary results. *Applied Energy*, 102, 374–385.
- Park, K., & Lee, G. W. (2013). Fabrication and thermoelectric power of π -shaped $\text{Ca}_3\text{Co}_4\text{O}_9/\text{CaMnO}_3$ modules for renewable energy conversion. *Energy*, 60, 87–93.
- Pollock, D. D. (1985). *Thermoelectricity: Theory, thermometry, tool* (No. 852). ASTM International.
- Rull-Bravo, M., Moure, A., Fernandez, J. F., & Martin-Gonzalez, M. (2015). Skutterudites as thermoelectric materials: revisited. *Rsc Advances*, 5(52), 41653–41667.
- Shikano, M., & Funahashi, R. (2003). Electrical and thermal properties of single-crystalline $(\text{Ca}_2\text{CoO}_3)_{0.7}\text{CoO}_2$ with a $\text{Ca}_3\text{Co}_4\text{O}_9$ structure. *Applied Physics Letters*, 82(12), 1851–1853.

- Tan, J. C., Tsipas, S. A., Golosnoy, I. O., Curran, J. A., Paul, S., & Clyne, T. W. (2006). A steady-state Bi-substrate technique for measurement of the thermal conductivity of ceramic coatings. *Surface and Coatings Technology*, 201(3), 1414–1420.
- Terasaki, I., Sasago, Y., & Uchinokura, K. (1997). Large thermoelectric power in NaCo_2O_4 single crystals. *Physical Review B*, 56(20), R12685.
- Tian, R., Zhang, T., Chu, D., Donelson, R., Tao, L., & Li, S. (2014). Enhancement of high temperature thermoelectric performance in Bi, Fe co-doped layered oxide-based material $\text{Ca}_3\text{Co}_4\text{O}_{9+\delta}$. *Journal of Alloys and Compounds*, 615, 311–315.
- Van Nong, N., Pryds, N., Linderth, S., & Ohtaki, M. (2011). Enhancement of the Thermoelectric Performance of p-Type Layered Oxide $\text{Ca}_3\text{Co}_4\text{O}_{9+\delta}$ Through Heavy Doping and Metallic Nano-inclusions. *Advanced Materials*, 23(21), 2484–2490.
- Vining, C. B. (2009). An inconvenient truth about thermoelectrics. *Nature materials*, 8(2), 83–85.
- Wang, C., Shi, L., Xu, X., Zhou, S., Zhao, J., Guo, Y., ... & Xu, G. (2013). High-temperature thermoelectric characteristics of B-site substituted $\text{Yb}_{0.1}\text{Ca}_{0.9}\text{Mn}_{1-x}\text{Nb}_x\text{O}_3$ system ($0 \leq x \leq 0.1$). *Applied Physics A*, 112(4), 1003–1009.
- Wang, Y., Sui, Y., Cheng, J., Wang, X., & Su, W. (2009). Comparison of the high temperature thermoelectric properties for Ag-doped and Ag-added $\text{Ca}_3\text{Co}_4\text{O}_9$. *Journal of Alloys and Compounds*, 477(1), 817–821.
- Wu, N., Holgate, T. C., Van Nong, N., Pryds, N., & Linderth, S. (2013). Effects of Synthesis and Spark Plasma Sintering Conditions on the Thermoelectric Properties of $\text{Ca}_3\text{Co}_4\text{O}_{9+\delta}$. *Journal of electronic materials*, 42(7), 2134–2142.

- Wu, N., Holgate, T. C., Van Nong, N., Pryds, N., & Linderoth, S. (2014). High temperature thermoelectric properties of $\text{Ca}_3\text{Co}_4\text{O}_{9+\delta}$ by auto-combustion synthesis and spark plasma sintering. *Journal of the European Ceramic Society*, *34*(4), 925–931.
- Wu, N., Van Nong, N., Pryds, N., & Linderoth, S. (2015). Effects of Yttrium and Iron co-doping on the high temperature thermoelectric properties of $\text{Ca}_3\text{Co}_4\text{O}_{9+\delta}$. *Journal of Alloys and Compounds*, *638*, 127–132.
- Xiang, P. H., Kinemuchi, Y., Kaga, H., & Watari, K. (2008). Fabrication and thermoelectric properties of $\text{Ca}_3\text{Co}_4\text{O}_9/\text{Ag}$ composites. *Journal of Alloys and Compounds*, *454*(1), 364–369.
- Xu, G., Fundashi, R., Pu, Q., Liu, B., Tao, R., Wang, G., & Ding, Z. (2004). High-temperature transport properties of Nb and Ta substituted CaMnO_3 system. *Solid State Ionics*, *171*(1), 147–151.
- Yu, C., & Chau, K. T. (2009). Thermoelectric automotive waste heat energy recovery using maximum power point tracking. *Energy Conversion and Management*, *50*(6), 1506–1512.
- Zhang, F.P., Lu, Q.M., Zhang, X., & Zhang, J.X. (2011). First principle investigation of electronic structure of CaMnO_3 thermoelectric compound oxide. *Journal of Alloys and Compounds*, *509*, 542–545.
- Zhang, Y., Cleary, M., Wang, X., Kempf, N., Schoensee, L., Yang, J., ... & Meda, L. (2015). High-temperature and high-power-density nanostructured thermoelectric generator for automotive waste heat recovery. *Energy Conversion and Management*, *105*, 946–950.
- Zhao, D., Qian, X., Gu, X., Jajja, S. A., & Yang, R. (2016). Measurement Techniques for Thermal Conductivity and Interfacial Thermal Conductance of Bulk and Thin Film Materials. *Journal of Electronic Packaging*, *138*(4), 040802.

- Zhou, Y., Matsubara, I., Funahashi, R., Xu, G., & Shikano, M. (2003). Influence of Mn-site doped with Ru on the high-temperature thermoelectric performance of $\text{CaMnO}_{3-\delta}$. *Materials research bulletin*, 38(2), 341–346.
- Zhu, Y. H., Su, W. B., Liu, J., Zhou, Y. C., Li, J., Zhang, X., ... & Wang, C. L. (2015). Effects of Dy and Yb co-doping on thermoelectric properties of CaMnO_3 ceramics. *Ceramics International*, 41(1), 1535–1539.
- Zhu, Y., Wang, C., Wang, H., Su, W., Liu, J., & Li, J. (2014). Influence of Dy/Bi dual doping on thermoelectric performance of CaMnO_3 ceramics. *Materials Chemistry and Physics*, 144(3), 385–389.

บัณฑิตวิทยาลัย มหาวิทยาลัยราชภัฏสุราษฎร์ธานี