

## Research activity on CaL and combustion of coal/biomass/wastes

### Publications (journals and international conferences)

1. T. Shimizu, K. Koseki, "Volatile matter capture by calcined limestone under Calcium-Looping process conditions", *Fuel Processing Technology*, 169, pp. 280-287, 2018
2. T. Shimizu, T. Shimoda, R. Houshito, H. Kato, H. Hara, L.-Y. Li, "N<sub>2</sub>O reduction and NO<sub>x</sub> adsorption in carbonator of calcium looping CO<sub>2</sub> capture process", *J. Jpn. Inst. Energy*, Vo.1.96, pp.228-238, 2017
3. T. Shimizu, K. Ito, S. Sizuno, R. Houshito, T. Shimoda, H. Tsukahara, L.-Y. Li, "Reaction pathways of NO<sub>x</sub> and N<sub>2</sub>O over CaO in the presence of char under carbonator conditions of Calcium-Looping CO<sub>2</sub> capture process", *J. Jpn. Inst. Energy*, Vo.1.95, pp.1115-1124, 2016
4. T. Shimizu, A. Yoshizawa, H.-J. Kim, L.-Y. Li, "Formation of CO and CO<sub>2</sub> in carbonator and NO<sub>x</sub> in regenerator under calcium looping process conditions", *J. Chem. Eng. Jpn.*, Vol.49, No.3, pp.280-286, 2016 doi: 10.1252/jcej.14we261
5. T. Shimizu, Y. Matsuura, A. Yoshizawa, Y. Shimazaki, T. Shimoda, H.-J. Kim, L.-Y. Li, "Reduction of NO<sub>x</sub> by char under condition for carbonator of calcium looping CO<sub>2</sub> capture process", *J. Jpn. Inst. Energy*, Vol.94, pp.841-850, 2015
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8. Kim. H.J., Kasadani, Y., Li L.Y., Shimizu, T., Kim. L.H., "Combustion and thermal decomposition characteristics of brown coal and biomass", *Journal of Energy Engineering*, Vol.21, No.4, 373-377, 2012
9. J.J. Saastamoinen<sup>a</sup>, T. Shimizu, A. Tourunen<sup>a</sup>, "Effect of attrition on particle size distribution and SO<sub>2</sub> capture in fluidized bed combustion under high CO<sub>2</sub> partial pressure conditions", *Chemical Engineering Science*, Vol.65, pp.550-555, 2010 (a:VTT Technical Research Centre of Finland)
10. Jun Han, Tadaaki Shimizu, Minami Wataru, Heejoon Kim, Guanghui Wang, "Polypropylene Combustion in a Fluidized Bed Combustor" , *Energy Sources, Part A*, Vol. 32, No.12, pp.1121 - 1129, 2010
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