

2020 年

【査読つき学術論文】

- 1) “Metal-substituted tungstosulfates with Keggin structure: Synthesis and characterization”, S. Azuma, T. Kadoguchi, Y. Eguchi, H. Hirabaru, H. Ota, M. Sadakane, K. Yanagisawa, T. Hasegawa, T. Ueda, Dalton Transactions 49, 2766-2770 (2020). FRONT COVER
- 2) “Modelling limitations encountered in the thermodynamic and electrode kinetic parameterization of the α -[S₂W₁₈O₆₂]^{4-/5-/6-} processes at glassy carbon and metal electrodes”, M. A. Rahman, J. Li, S.-X. Guo, G. Kennedy, T. Ueda, A. M. Bond, J. Zhang, J. Electroanal. Chem., in press.
- 3) “New path for polyoxometalates: Controlled synthesis and characterization of metal-substituted tungstosulphates”, H. Hirabaru, D. Kawamoto, M. Ohnishi, H. Ota, M. Sadakane, K. Yanagisawa, T. Hasegawa, T. Ueda, Eur. J. Inorg. Chem., 682-689 (2020). FRONT COVER
- 4) “Preparation of MGF Phosphor by O₂ Postannealing and Impact on Luminescence Properties and Crystal Lattice”, T. Hasegawa, R. Tanaka, T. Ueda, K. Toda, J. Am. Ceramic Soc., 103, 5145-5156 (2020).
- 5) “Impact of the lithium cation on the voltammetry and spectroscopy of [XVM₁₁O₄₀]ⁿ⁻ (X = P, As (n = 4), S (n = 3); M = Mo, W): Influence of charge and addenda and hetero atoms”, T. Konishi, K. Kodani, T. Hasegawa, S. Ogo, S-X. Guo, J. Boas, J. Zhang, A. M. Bond, T. Ueda, Inorg. Chem., 59, 10522-10531 (2020). COVER ARTICLE
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- 8) “Electrode Material Dependence, Ion-Pairing and the Progressive Increase in Complexity of the α -[S₂W₁₈O₆₂]^{4-/5-/6-/7-/8-/9-/10-} Reduction Processes in Acetonitrile Containing [n-Bu₄N][PF₆] as the Supporting Electrolyte”, Md. A. Rahman, L. Gundry, T. Ueda, A. M. Bond, J. Zhang, J. Phys. Chem., C., 124, 16032-16047 (2020).
- 9) “Heteroatom doping effects on interaction of H₂O and CeO₂ (111) surfaces studied using density functional theory: Key roles of ionic radius and dispersion”, Kota Murakami, S. Ogo, A. Ishikawa, Y. Takeno, T. Higo, H. Tsuneki, H. Nakai, Y. Sekine, Journal of Chemical Physics, 152, 014707 (2020).
- 10) “Low-temperature selective dehydrogenation of methylcyclohexane by surface protonics over Pt/anatase-TiO₂ catalyst”, M. Kosaka, T. Higo, S. Ogo, J. G. Seo, S. Kado, K. Imagawa, Y. Sekine, International Journal of Hydrogen Energy, 45, 738-743 (2020).
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- 13) “Effect of metal cation doping in CeO₂ support on catalytic methane steam reforming at low temperature in an electric field”, A. Takahashi, R. Inagaki, M. Torimoto, Y. Hisai, T. Matsuda, Q. Ma, J. G. Seo, T. Higo, H. Tsuneki, S. Ogo, T. Norby, Y. Sekine*, RSC Advances, 10 (2020) 14487-14492.
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- 15) “Agglomeration Suppression of Fe-Supported Catalyst and its Utilization for Low-Temperature Ammonia Synthesis in an Electric Field”, R. Sakai, K. Murakami, Y. Mizutani, Y. Tanaka, S. Hayashi, A. Ishikawa, T. Higo, S. Ogo, H. Tsuneki, H. Nakai, Y. Sekine*, ACS Omega, 5, 6846-6851 (2020). Cover picture
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- 19) “Support effects on catalysis of low temperature methane steam reforming”, M. Torimoto, S. Ogo, Y. Hisai, N. Nakano, A. Takahashi, Q. Ma, J. G. Seo, H. Tsuneki, T. Norby, Y. Sekine, RSC Advances, 10, 26418-26424 (2020).

【受賞】

- 1) 触媒学会 奨励賞 (2019 年度), 電場を利用したメタン酸化カップリングのための触媒開発, 小河脩平, 2020 年 3 月
- 2) 令和 2 年度 科学技術分野の文部科学大臣表彰 若手科学者賞, 新規反応場による低温での触媒反応の研究, 小河修平, 2020 年 4 月
- 3) 石油学会 2019 年度 論文賞, Selective Adsorption of Toluene on Perovskite-type Oxide, 鈴木 智大, 塩野 兄鯉, 眞鍋 将太, 矢部 智宏, 比護 拓馬, 小河 脩平, 関根 泰, 2020 年 5 月