

No.	Description
48	Inoishi, A., Ju, Y.W., Ida, S. and Ishihara, T. (2013) Fe-air rechargeable battery using oxide ion conducting electrolyte of Y ₂ O ₃ stabilized ZrO ₂ , Journal of Power Sources, 229, 12-15. DOI: 10.1016/j.jpowsour.2012.11.121
47	Nishida, J., Kobayashi, M. and Takahara, A. (2013) Gelation and Adhesion Behavior of Mussel Adhesive Protein Mimetic Polymer, Journal of Polymer Science Part A: Polymer Chemistry, 51 (5), 1058-1065. DOI: 10.1002/pola.26487
46	Uoyama, H., Goushi, K., Shizu, K., Nomura, H. and Adachi, C. (2012) Highly efficient organic light-emitting diodes from delayed fluorescence, Nature, 492 (7428), 234-238. DOI: 10.1038/nature11687
45	Haraguchi, M., Hirai, T., Ozawa, M., Miyaji, K. and Tanaka, K. (2013) Hydrophobic acrylic hard coating by surface segregation of hyper-branched polymers, Applied Surface Science, 266, 235-238. DOI: 10.1016/j.apsusc.2012.11.160
44	Inoishi, A., Ida, I., Uratani, S., Okano, T. and Ishihara, T. (2013) Ni-Fe-Ce(Mn,Fe)O ₂ cermet anode for rechargeable Fe-Air battery using LaGaO ₃ oxide ion conductor as electrolyte, RSC Advances, 3 (9), 3024-3030. DOI: 10.1039/C2RA23370C
43	Xu, H., Nishida, J., Wu, H., Higaki, Y., Otsuka, H., Ohta, N. and Takahara, A. (2013) Structural effects of catechol-containing polystyrene gels based on a dual cross-linking approach, SOFT MATTER, 9 (6), 1967-1974. DOI: 10.1039/C2SM26994E
42	Arita, H., Mitamura, K., Kobayashi, M., Yamada, N.L., Jinnai, H. and Takahara, A. (2013) Chain-mixing behavior at interface between polystyrene brushes and polystyrene matrices, POLYMER JOURNAL, 45 (1), 117-123. DOI: 10.1038/pj.2012.198
41	Hyodo, J., Ida, S., Kilner, J.A. and Ishihara, T. (2013) Electronic and oxide ion conductivity in Pr ₂ Ni _{0.71} Cu _{0.24} Ga _{0.05} O ₄ /Ce _{0.8} Sm _{0.2} O ₂ laminated film, Solid State Ionics, 230, 16-20. DOI: 10.1016/j.ssi.2012.10.018
40	Ju, Y.-W., Ida, S. and Ishihara, T. (2012) Nickel-iron anode substrate for smart solidoxide fuel cells with a self-protecting function against reoxidation, Fuel Cells, 12 (6), 1064-1069. DOI: 10.1002/fuce.201200114
39	Ma, W., Higaki, Y., Otsuka, H. and Takahara, A. (2013) Perfluoropolyether-infused nano-texture: a versatile approach to omniphobic coatings with low hysteresis and high transparency, CHEMICAL COMMUNICATIONS, 49 (6), 597-599. DOI: 10.1039/c2cc37576a
38	Matsumoto, H., Sakai, T. and Okuyama, Y. (2013) Proton-conducting oxide and applications to hydrogen energy devices, Pure and Applied Chemistry, 85 (2), 427-435. DOI: 10.1351/PAC-CON-12-07-11
37	Xie, J., Ju, Y.-W., Matsuka, M., Ida, S. and Ishihara, T. (2013) Synergy effects of Pr _{1.91} Ni _{0.71} Cu _{0.24} Ga _{0.05} O ₄ and Ba _{0.5} La _{0.5} CoO ₃ composite on cathodic activity for intermediate temperature solid oxide fuel cells, Journal of Power Sources, 228, 229-236. DOI: 10.1016/j.jpowsour.2012.11.089
36	Hoshino, T., Murakami, D., Ito, K., Tanaka, Y., Sasaki, S., Takata, M., Jinnai, H. and Takahara,

	A. (2013) Thermal gradient effect on the dynamical behavior of nanoparticles observed using X-ray photon correlation spectroscopy, <i>POLYMER JOURNAL</i> , 45 (1), 94-99. DOI: 10.1038/pj.2012.193
35	Jinnai, H., Tsuchiya, T., Motoki, S., Kaneko, T., Higuchi, T. and Takahara, A. (2013) Transmission electron microtomography in soft materials, <i>Journal of Electron Microscopy</i> , 62 (2), 243-258. DOI: 10.1093/jmicro/dfs070
34	Tsuruta, H., Ikinaga, Y., Fujii, Y. and Tanaka, K. (2013) A simple approach for surface hardening of polystyrene, <i>Applied Surface Science</i> , 264 (1), 589-592. DOI: 10.1016/j.apsusc.2012.10.070
33	Kobayashi, M., Matsugi, T., Saito, J., Imuta, J., Kashiwa, N. and Takahara, A. (2013) Direct modification of polyolefin films by surfaceinitiated polymerization of a phosphobetaine monomer, <i>Polymer Chemistry</i> , 4 (3), 731-739. DOI: 10.1039/c2py20712e
32	Zhang, C., Fujii, Y. and Tanaka, K. (2012) Effect of Long Range Interactions on the Glass Transition Temperature of Thin Polystyrene Films, <i>ACS MACRO LETTERS</i> , 1 (11), 1317-1320. DOI: 10.1021/mz300391g
31	Mitamura, K., Yamada, N.L., Sagehashi, H., Torikai, N., Arita, H., Terada, M., Kobayashi, M., Sato, S., Seto, H., Goko, S., Furusaka, M., Oda, T., Hino, M., Jinnai, H., and Takahara, A. (2013) Novel neutron reflectometer SOFIA at J-PARC/MLF for in-situ soft-interface characterization, <i>POLYMER JOURNAL</i> , 45 (1), 100-108. DOI: 10.1038/pj.2012.156
30	Yashima, M., Yamada, H., Nuansaeng, S. and Ishihara, T. (2012) Role of Ga ³⁺ and Cu ²⁺ in the High Interstitial Oxide-Ion Diffusivity of Pr ₂ NiO ₄ -Based Oxides: Design Concept of Interstitial Ion Conductors through the Higher-Valence d(10) Dopant and Jahn-Teller Effect, <i>Chemistry of Materials</i> , 18, 11125-4113. DOI: 10.1021/cm3021287
29	Schacher, F.H., Sugimori, H., Hong, S., Jinnai, H. and Müller, A.H.E. (2012) Tetragonally Perforated Lamellae of Polybutadiene-block-poly(2-vinylpyridine)-block-poly(tert-butyl methacrylate) (BVT) Triblock Terpolymers in the Bulk: Preparation, Cross-Linking, and Dissolution, <i>MACROMOLECULES</i> , 45 (19), 7956-7963. DOI: 10.1021/ma3012398
28	Staykov, A., Li, X., Tsuji, Y. and Yoshizawa, K. (2012) Current Rectification in Nitrogen- and Boron-Doped Nanographenes and Cyclophanes, <i>JOURNAL OF PHYSICAL CHEMISTRY C</i> , 116 (34), 18451-18459. DOI: 10.1021/jp303843k
27	Hirai, T., Kawasaki, K. and Tanaka, K. (2012) Interfacial kinetics of a model epoxy-amine addition reaction, <i>PHYSICAL CHEMISTRY CHEMICAL PHYSICS</i> , 14 (39), 13532-13534. DOI: 10.1039/c2cp42673k
26	Ida, S., Okamoto, Y., Matsuka, M., Hagiwara, H. and Ishihara, T. (2012) Preparation of Tantalum-Based Oxynitride Nanosheets by Exfoliation of a Layered Oxynitride, CsCa ₂ Ta ₃ O _{10-x} N _y , and Their Photocatalytic Activity, <i>JOURNAL OF THE AMERICAN CHEMICAL SOCIETY</i> , 134 (38), 15773-15782. DOI: 10.1021/ja3043678
25	Shin T.H., Okamoto, Y., Ida, S. and Ishihara T. (2012) Self-recovery of Pd Nanoparticles That were Dispersed over La(Sr)Fe(Mn)O ₃ for Intelligent Oxide Anodes of Solid-Oxide Fuel Cells, <i>Chemistry - A European Journal</i> , 18 (37), 11695-11702. DOI: 10.1002/chem.201200536

24	Higaki, Y., Okazaki, R. and Takahara, A. (2012) Semirigid Biobased Polymer Brush: Poly(α -methylene- γ -butyrolactone) Brushes, ACS MACRO LETTERS, 1 (9), 1124-1127. DOI: 10.1021/mz3002148
23	Yah, W.O., Xu, H., Soejima, H., Ma, W., Lvov, Y. and Takahara, A. (2012) Biomimetic Dopamine Derivative for Selective Polymer Modification of Halloysite Nanotube Lumen, JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, 134 (29), 12134-12137. DOI: 10.1021/ja303340f
22	Matsubayashi, A., Fukunaga, K. and Tanaka, K. (2012) Metal ions/ion clusters transport in glassy polymer films: construction of multi-layered polymer and metal composite films, JOURNAL OF MATERIALS CHEMISTRY, 22 (31), 15578-15585. DOI: 10.1039/c2jm31923c
21	Tsuji, Y., Staykov, A. and Yoshizawa, K. (2012) Orbital Determining Spintronic Properties of a π -Conjugated System, JOURNAL OF PHYSICAL CHEMISTRY C, 116 (30), 16325-16332. DOI: 10.1021/jp305448q
20	Staykov, A., Nishimi, T., Yoshizawa, K. and Ishihara, T. (2012) Oxygen Activation on Nanometer-Size Gold Nanoparticles, JOURNAL OF PHYSICAL CHEMISTRY C, 116 (30), 15992-16000. DOI: 10.1021/jp301898t
19	Kim, S.-J., Sakai, T., Oda, H., Okuyama, Y., Mizutani, Y., Hamagami, J.-I., Matsuka, M., Ishihara, T. and Matsumoto, H. (2012) Long-term stability of sulfated hydrous titania-based electrolyte for water electrolysis, Journal of Solid State Electrochem, 16, 3587-3592. DOI: 10.1007/s10008-012-1793-5
18	Kobayashi, M., Masaoka, S. and Sakai, K. (2012) Photoinduced Hydrogen Evolution from Water by a Simple Platinum(II) Terpyridine Derivative: A Z-Scheme Photosynthesis, ANGEWANDTE CHEMIE-INTERNATIONAL EDITION, 51 (30), 7431-7434. DOI: 10.1002/anie.201202720
17	Shinohara, T., Shirahase, T., Murakami, D., Hoshino, T., Kikuchi, M., Koike, J.-I., Horigome, M., Masunaga, H., Ogawa, H. and Takahara, A. (2013) Precise and Non-destructive Characterization of 'Buried' Nano-structure in Polymer Thin Film by Synchrotron Radiation Ultra-Small Angle X-ray Scattering, POLYMER JOURNAL, 45 (3), 307-312. DOI: 10.1038/pj.2012.133
16	Hori, K., Penalzoza, D.P., Shundo, A. and Tanaka, K. (2012) Time-dependent heterogeneity in viscoelastic properties of worm-like micelle solutions, SOFT MATTER, 8 (28), 7361-7364. DOI: 10.1039/c2sm25549a
15	Ma, W., Wu, H., Higaki, Y., Otsuka, H. and Takahara, A. (2012) A "non-sticky" superhydrophobic surface prepared by self-assembly of fluoroalkyl phosphonic acid on a hierarchically micro/nanostructured alumina gel film, CHEMICAL COMMUNICATIONS, 48 (54), 6824-6826. DOI: 10.1039/c2cc32513f
14	Okamura, M., Yoshida, M., Kuga, R., Sakai, K., Kondo, M. and Masaoka, S. (2012) A Mononuclear Ruthenium Complex Showing Multiple Proton-Coupled Electron Transfer toward Multi-electron Transfer Reactions, DALTON TRANSACTIONS, 41 (42), 13081-13089. DOI: 10.1039/c2dt30773a

13	Horinouchi, A., Atarashi, H., Fujii, Y. and Tanaka, K. (2012) Dynamics of water-induced surface reorganization in poly(methyl methacrylate) films, <i>MACROMOLECULES</i> , 45 (11), 4643-4649. DOI: 10.1021/ma3002559
12	Sakai, T., Matsushita, S., Hyodo, J., Okuyama, Y., Matsuka, M., Ishihara, T. and Matsumoto, H. (2012) Effect of doped ceria interlayer on cathode performance of the electrochemical cell using proton conducting oxide, <i>Electrochimica Acta</i> , 75 179-184. DOI: 10.1016/j.electacta.2012.04.102
11	Tsuruta, H., Fujii, Y., Kai, N., Kataoka, H., Ishizone, T., Doi, M., Morita, H. and Tanaka, K. (2012) Local conformation and relaxation of polystyrene at substrate interface, <i>MACROMOLECULES</i> , 45 (11), 4643-4649. DOI: 10.1021/ma3007202
10	Hagirawa, H., Nagatomo, M., Ida, S. and Ishihara, T. (2012) Photocatalytic splitting of water into hydrogen and oxygen on organic dye modified $\text{KTa}(\text{Zr})\text{O}_3$ catalyst, <i>Energy Procedia</i> , 22, 53-60. DOI: 10.1016/j.egypro.2012.05.224
9	Ma, W., Yah, W.O., Otsuka, H. and Takahara, A. (2012) Application of imogolite clay nanotubes in organic-inorganic nanohybrid materials, <i>JOURNAL OF MATERIALS CHEMISTRY</i> , 22 (24), 11887-11892. DOI: 10.1039/c2jm31570j
8	Seok-Jun, K., Sakai, T., Oda, H., Hamagami, J.-I., Okuyama, Y., Matsuka, M., Ohta, S., Shimizu, Y., Ishihara, T. and Matsumoto, H. (2012) Water Electrolysis Using Water-Absorbing Porous Electrolyte Consisting of a Sulfonated Nanotitania Proton Conductor, <i>ELECTROCHEMISTRY</i> , 80 (4), 246-248. DOI: 10.5796/electrochemistry.80.246
7	Ishihara, T., Matsushita, S., Sakai, T. and Matsumoto, H. (2012) Intermediate temperature solid oxide electrolysis cell using LaGaO_3 -base oxide, <i>Solid State Ionics</i> , 225, 77-80. DOI: 10.1016/j.ssi.2012.02.052
6	Kobayashi, M., Masaoka, S. and Sakai, K. (2012) Synthesis, crystal structure, spectroscopic and electrochemical properties, and H_2 -evolving activity of a new $[\text{PtCl}(\text{terpyridine})](+)$ derivative with viologen-like redox properties, <i>DALTON TRANSACTIONS</i> , 41, 4903-4911. DOI: 10.1039/c2dt12209j
5	Wu, H., Su, Z. and Takahara, A. (2012) Isotactic polystyrene nanorods with gradient crystallite states, <i>SOFT MATTER</i> , 8, 3180-3184. DOI: 10.1039/c2sm06896f
4	Penaloza, D.P., Hori, K., Shundo, A. and Tanaka, K. (2012) Spatial heterogeneity in a lyotropic liquid crystal with hexagonal phase, <i>PHYSICAL CHEMISTRY CHEMICAL PHYSICS</i> , 14 (15), 5247-5250. DOI: 10.1039/c2cp40284j
3	Ishihara, T., Tominaga, K., Hyodo, J. and Matsuka, M. (2012) Improved electrical conductivity in $\text{Pr}_2\text{Ni}(\text{Cu,Ga})\text{O}_4$ film with nano thickness, <i>INTERNATIONAL JOURNAL OF HYDROGEN ENERGY</i> , 37, 8066-8072. DOI: 10.1016/j.ijhydene.2011.12.026
2	Yamaguchi, H., Kikuchi, M., Kobayashi, M., Ogawa, H., Masunaga, H., Sakata, O. and Takahara, A. (2012) Influence of Molecular Weight Dispersity of Poly{2-(perfluorooctyl)ethyl acrylate} Brushes on Their Molecular Aggregation States and Wetting Behavior, <i>MACROMOLECULES</i> , 45 (3), 1509-1516. DOI: 10.1021/ma202300r

Division: Molecular Photoconversion Division
Year: 2012

1	Li, X., Staykov, A. and Yoshizawa, K. (2012) Orbital Views on Electron-Transport Properties of Cyclophanes: Insight into Intermolecular Transport, Bulletin of the Chemical Society of Japan, 85 (2), 181-188. DOI: 10.1246/bcsj.20110256
---	---