

List of Publications (Toyoko Imae)

[original paper] (Only English) (2007-2012)

- 224) Fluorescence Emission from PAMAM and PPI Dendrimers, Dongjun Wang, Toyoko Imae, and Masao Miki, *J. Colloid Interface Science*, 307, 354-360 (2007).
- 225) Fluorescence Quenching of 3,7-diamino-2,8-dimethyl-5-phenyl Phenazinium Chloride by AgCl and Ag Nanoparticles, Smritimoy Pramanik, Subhash Chandra Bhattacharya, and Toyoko Imae, *Journal of Luminescence*, 126, 155-159 (2007).
- 226) Shape-Controlled Synthesis of Gold Nanoparticles Under UV irradiation in the Presence of Poly(Ethylene Glycol), Xuzhong Luo and Toyoko Imae, *Current Nanoscience (CNANO)*, 3, 195-198 (2007).
- 227) Photochemical synthesis of crown-shaped platinum nanoparticles using aggregates of G4-NH₂ PAMAM dendrimer as templates, Xuzhong Luo and Toyoko Imae, *Journal of Materials Chemistry*, 17, 567 – 571(2007).
- 228) Size-controlled *In Situ* Synthesis of Metal Nanoparticles on Dendrimer-Modified Carbon Nanotubes, Xing Lu and Toyoko Imae, *J. Phys. Chem. C*, 111, 2416-2420 (2007).
- 229) Dendrimer-mediated Synthesis of Water-dispersible Carbon Nanotube-supported Oxide Nanoparticles, Xing Lu and Toyoko Imae, *J. Phys. Chem. C*, 111, 8459-8462 (2007).
- 230) Fabrication and Self-Assembly of Hydrophobic Gold Nanorods, Koji Mitamura, Toyoko Imae, Nagahiro Saito, and Osamu Takai, *J. Phys. Chem. B*, 111, 8891-8898 (2007).
- 231) Structural aspects of SBA-1 cubic mesoporous silica synthesized via a sol-gel process using silatrane precursor, walairat tanglumlord, Toyoko Imae, Timothy John White, and Sujitra Wongkasemjit, *Journal of the American Ceramic Society*, 90, 3992-3997 (2007).
- 232) Fabrication and Structure of Alginate Gel Incorporating Gold Nanorods, Koji Mitamura; Toyoko Imae; Nagahiro Saito; Osamu Takai, *J. Phys. Chem. C*, 112, 416-422 (2008).
- 233) Transport properties of field-effect transistor with Langmuir-Blodgett films of C60 dendrimer and estimation of impurity levels, Naoko Kawasaki, Takayuki Nagano, Yoshihiro Kubozono, Yuuki Sako, Yuu Morimoto, Yutaka Takaguchi, Akihiko Fujiwara, Chih-Chien Chu, and Toyoko Imae *Applied Physics Letters*, 91, 243515-1-243515-3 (2008).
- 234) Solid-phase Synthesis of Amphiphilic Dendron-Surface Modified Silica Particles and Their Application Toward Water Purification, Chih-Chien Chu, Norio Ueno and Toyoko Imae, *Chem. Mater.*, 20, 2669-2676 (2008).
- 235) Surface Plasmon Fluorescence Investigation of Energy Transfer-controllable Organic Thin Films, Langmuir, Koji Mitamura, Toyoko Imae, Senjun Tian and Wolfgang Knoll, *Langmuir*, 24,

2266-2270 (2008).

236) Synthesis and Characterization of Poly(ethyleneimine) Dendrimers, Omprakash Yemul and Toyoko Imae, *Colloid and Polymer Science*, 286, 747-752 (2008).

237) Investigation of luminescent poly(propylene imine) dendrimer, Kana Tamano and Toyoko Imae, *J. Nanosci. Nanotech.*, 8, 4329-4334 (2008).

238) Preparation of highly ordered Fe-SBA-1 and Ti-SBA-1 cubic mesoporous silica via sol-gel processing of silatrane, Walairat Tanglumlert, Toyoko Imae, Timothy John White, Sujitra Wongkasemjit, *Materials Letters*, 62, 4545-4548 (2008).

239) Synthesis of Confeito-Like Gold Nanostructures by a Solution Phase Galvanic Reaction, Jadab Sharma, Yian Tai, and Toyoko Imae, *J.Phys.Chem. C*, 112, 17033-17037 (2008).

240) Recent Advances in Fabrication of Anisotropic Metallic Nanostructures, Jadab Sharma and Toyoko Imae, *J. Nanosci. Nanotechnol.* 9, 19-40 (2009). (Review article)

241) Fabrication of dendrimer porogen-capsulated mesoporous silica via sol-gel process of silatrane precursor, Walairat Tanglumlert, Sujitra Wongkasemjit, and Toyoko Imae, *J. Nanosci. Nanotech.*, 9, 1844-1850 (2009).

242) Surface Modification of Gold Nanorods by Organosilanes, Koji Mitamura, Toyoko Imae, Nagahiro Saito, and Osamu Takai, *Composite Interfaces*, 16, 377-385 (2009).

243) Fluorescence investigations of oxygen-doped simple amine; in comparison with fluorescent PAMAM dendrimer, Chih-Chien Chu and Toyoko Imae, *Macromol. Rapid Commun.*, 16, 89-93 (2009).

245) Functionalization of Gold Nanorods toward Their Applications, Koji Mitamura and Toyoko Imae, *Plasmonics*, 4, 23-30 (2009). (review article)

246) Synthesis of Poly(amido amine) Dendrimer with Redox-Active Spacers, Chih-Chien Chu and Toyoko Imae, *Macromolecules*, 42, 2295-2299 (2009).

247) Perpendicular Superlattice Growth of Hydrophobic Gold Nanorods on Patterned Silicon Substrates via Evaporation-induced Self-assembling, Xiaoming Zhang and Toyoko Imae, *J. Phys. Chem. C*, 113, 5947-5951(2009).

248) pH Dependent Encapsulation of Pyrene in PPI-core:PAMAM-shell Dendrimers, Dinakaran Kannaiyan and Toyoko Imae, *Langmuir*, 25, 5282-5285 (2009).

249) Synthesis of Mo-SBA-1 catalyst via sol-gel process and its activity, Sujitra Wongkasemjit; Suparb Tamuang; Walairat Tanglumlert; Toyoko Imae, *Materials Chemistry and Physics*, 117, 301-306 (2009).

250) Hierarchical Structures of Dendritic Polymers, Masaki Ujihara and Toyoko Imae, *Polym. Int.*, 59, 137-144 (2010). (Review article)

251) Immobilization of amphiphilic dendron on silica particles toward the application to ultrahigh pressure liquid chromatography, Chih-Chien Chu, Norio Ueno, and Toyoko Imae, *J. Nanosci.*

Nanotec., 10, 5324-5327 (2010).

252) Bio-modulation Approach for Gold Nanoparticles: Synthesis of Anisotropic to Luminescent Particles, Jadab Sharma, Yian Tai, and Toyoko Imae, Chemistry - an Asian Journal, 5, 70-73 (2010).

253) Characterization of mimetic lipid mixtures of stratum corneum, Xiaojuan Wang, Masaki Ujihara, Toyoko Imae, Akira Ishikubo, Yuki Sugiyama, and Tooru Okamoto' Colloids and Surfaces B: Biointerfaces, 78, 92-100 (2010).

254) Visual observation of selective elution of components from skin-mimetic lipid membrane, Xiaojuan Wang, Masaki Ujihara, Toyoko Imae, Takuya Saiwaki, Akira Ishikubo, and Tooru Okamoto, Colloids and Surfaces B: Biointerfaces, 81, 174-177 (2010).

255) Damage/Recovery by Additive on Lipid Membrane as a Mimicry of Human Stratum Corneum, Yan Zhu, Toyoko Imae, Takuya Saiwaki and Takashi Oka, Langmuir, 26, 4951-4957 (2010).

256) Surface functionalization of carbon micro coils and their selective immobilization on surface-modified silicon substrates, Prashanta Dhoj Adhikari, Yian Tai, Masaki Ujihara, Chih-Chien Chu, Toyoko Imae, and Seiji Motojima, J. Nanosci. Nanotec., 10, 833-839 (2010).

257) Reinforcement on Properties of Poly(vinyl alcohol) Films by Embedding Functionalized Carbon Micro Coils, Prashanta Dhoj Adhikari, Masaki Ujihara, Toyoko Imae, Po-Da Hong and Seiji Motojima' J. Nanosci. Nanotec. 11, 1004-1012 (2010).

258) Sensitizing of Pyrene Fluorescence by β -cyclodextrin-modified TiO_2 Nanoparticles, Indrajit Shown; Masaki Ujihara; and Toyoko Imae, Journal of Colloid & Interface Science, 352, 232-237 (2010).

259) Synthesis of β -cyclodextrin-modified water-dispersible Ag- TiO_2 core-shell nanoparticles and their photocatalytic activity, J. Nanaosci. Nanotec., Indrajit Shown, Masaki Ujihara and Toyoko Imae, 11, 3284-3290 (2011).

260) Visual observation and characterization of fluorescent poly(amido amine) dendrimer in film state, Govindachetty Saravanan and Toyoko Imae, J. Nanosci. Nanotech, 11, 4838-4845 (2011).

261) Visual observation of avidin-biotin affinity by fluorescent G4.5 poly(amidoamine) dendrimer, Govindachetty Saravanan, Kenji Daigo, Toyoko Imae, and Takao Hamakubo, Colloids and Surfaces B: Biointerfaces, 83, 58-60 (2011).

262) Synthesis and Characterization of "Hairy Urchin"-like Polyaniline by Using β -Cyclodextrin as a Template, Adhimoorthy Prasannan, Tram Le Bich Truong, Po-Da-Hong, Narayanasastri Somanathan, Indrajit Shown and Toyoko Imae, Langmuir, 27, 766-773 (2011).

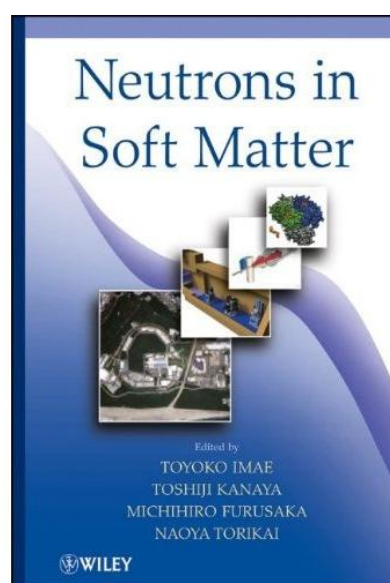
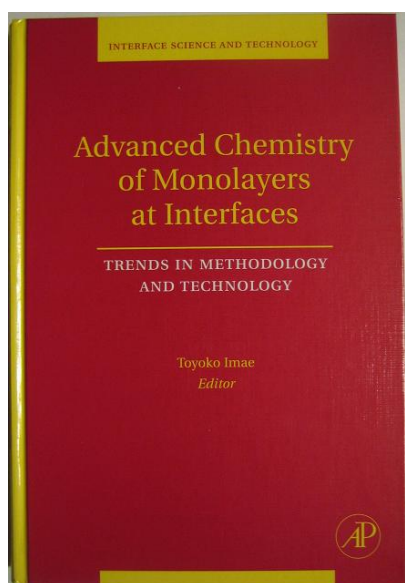
264) A combination of hard and soft templating for the fabrication of silica hollow microcoils with nanostructured walls, Carlos Rodriguez-Abreu, Neus Vilanova, Conxita Solans, Masaki Ujihara, Toyoko Imae, Arturo Lopez-Quintela and Seiji Motojima, Nanoscale Research Letters, 6, 330 (2011).

265) Self-association behavior in water of an amphiphilic diblock copolymer comprised of anionic

- and dendritic blocks, Shin-ichi Yusa, Yoshihiko Shimada, Toyoko Imae, and Yotaro Morishima, *Polymer Chemistry*, 2, 1815-1821 (2011).
- 266) Selective immobilization of carbon micro coils on patterned substrates and their electrochemical behavior on ITO substrate, Prashanta Dhoj Adhikari, Toyoko Imae, and Seiji Motojima, *Chemical Engineering Journal*, 174, 693-698 (2011).
- 267) Intrinsically Fluorescent PAMAM Dendrimer as Gene Carrier and Nanoprobe for Nucleic Acids Delivery: Bioimaging and Transfection Study, Ya-Ju Tsai, Chao-Chin Hu, CHih-Chien Chu, and Toyoko Imae, *Biomacromolecules*, 12, 4283-4290 (2011).
- 268) Two Photon Confocal Imaging Study: Cell Uptake of Two photon Dye-labeled PAMAM Dendron with HeLa Cells, H.-C. Tsai, T. Imae, G. Calderó, C. Solans, *J. Biomed. Mater. Res. A.*, 100A, 746-756 (2012).
- 269) Thermal Degradation Analysis of the isocyanate polyhedral oligomeric silsesquioxanes (POSS)/sulfone epoxy nanocomposite, Yie-Chan Chiu, Hsieh-Chih Tsai, and Toyoko Imae, *Journal of Applied Polymer Science*, 124, 1234-1240 (2012).
- 270) Network of sodium hyaluronate with nano-knots junction of poly(amido amine) dendrimer, Toyoko Imae and Shin-ichi Hamaguchi, *Carbohydrate Polymers*, 88, 352-360 (2012).
- 271) Fabrication of carbon microcoil/polyaniline composite by microemulsion polymerization for electrochemical functional enhancement, Indrajit Shown, Toyoko Imae, Seiji Motojima, *Chemical Engineering Journal*, 187, 380-384 (2012). (Cover-page illustration)
- 272) Solution-based nano-plasmonic sensing technique by using gold nanorods, Fu Han Ho, Yung-Han Wu, Masaki Ujihara and Toyoko Imae, *Analyst*, (2012) in press

[edited monograph] (2007-2011)

- 1) **Advanced Chemistry of Monolayers at Interfaces – Trends in Methodology and Technology** –, Ed. by Toyoko Imae, Elsevier Science Publishers, Amsterdam, 2007.
- 2) **Neutrons in Soft Matter**, Eds. Toyoko Imae, Toshiji Kanaya, Michihiro Furusaka, and Naoya Torikai, John Wiley & Sons, Inc., Hoboken, New Jersey, 2011.



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- 18) Homo- and Hybrid-Monolayers of Dendritic Polymers, Toyoko Imae, Masaki Ujihara, and Mariko Hayashi, in “Advanced Chemistry of Monolayers at Interfaces – Trends in Methodology and Technology –“ Ed, T. Imae, Chapter 9, 219-245 (2007).
- 19) Mesophase Morphologies of Silicone Block Copolymers in a Selective Solvent Studied by SAXS, Dietrich Leisner, Md. Hemayet Uddin, M. Arturo López-Quintela, Toyoko Imae and Hironobu Kunieda, Self-Organized Surfactant Structures, edited by Tharwat F. Tadros, Wiley, 161-174 (2010).
- 20) Structure of Dendritic Polymers and Their Films, Koji Mitamura and Toyoko Imae, in “Neutrons in Soft Matter”, Eds. Toyoko Imae, Toshiji Kanaya, Michihiro Furusaka, and Naoya Torikai, Wiley, (2011).
- 21) Fabrication of dendrimers towards biological application”, Hsieh-Chih Tsai and Toyoko Imae, in “Nanoparticles in Translational Science and Medicine in Progress in Molecular Biology and Translational Science book series”, Academic Press (Elsevier) Part I, Chapter 3, 101-140 (2011).
- 22) Physicochemical Properties of Dendrimers and Dendrimer-drug Complexes, Toyoko Imae, in “Dendrimer-based Drug Delivery Systems: from Theory to Practice”, Ed. YiYun Cheng, John Wiley Sons., Inc., Chapter 3, in press.
- 23) Synthesis of water-dispersible carbon nanotube–fullerodendron hybrids, Kumi Hamada, Toyoko Imae, Yu Morimoto, and Yutaka Takaguchi, in “Nanostructured Materials: Synthesis, Characterization and Applications”, Eds. Ajesh Zachariah, Nandakumar Kalariakkal, Yang Weimin, A.K. Haghi and Sabu Thomas, Apple Academic Press Inc., 3333 Mistwell Crescent, Oakville,

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