Comprehensive list of publications (2021.07.02)

Issei OTSUKA, PhD, HDR

CNRS Permanent Researcher

Centre de Recherches sur les Macromolécules Végétales (CERMAV)

The French National Centre for Scientific Research (CNRS)

Peer-reviewed articles (h-index: 24, citation: 1479 - web of science, *corresponding author):

P55.* **I. Otsuka***; K. Pandey; H. Ahmadi-Nohadani; S. Nono-Tagne "Electrospun Cellulosic Membranes towards Efficient Chiral Resolutions via Enantioselective Permeation" *ACS Macro Lett.*, **2021**, *10*, 921−925.

P54.* D. Poshina; **I. Otsuka*** "Electrospun Polysaccharidic Textiles for Biomedical Applications" *Textiles*, **2021**, *1*, 152−169.

P53. M. Gestranius†; **I. Otsuka**†; S. Halila; D. Hermida-Merino; E. Solano; R. Borsali, T. Tammelin "High-resolution Patterned Biobased Thin Films via Self-assembled Carbohydrate Block Copolymers and Nanocellulose" *Adv. Mater. Interfaces*, **2020**, *7*, 1901737. **†These authors contributed equally to this work.**

P52.* **I. Otsuka***; X. Zhang; F. M. Winnik* "Phototropic Multiresponsive Active Nanogels" *Mcromol. Rapid Commun.*, **2019**, *40*, 1900479.

P51.* **I. Otsuka***; C. J. Barrett "Electrospinning of Photo-responsive Azo-Cellulose: towards Smart Fibrous Materials" *Cellulose*, **2019**, *26*, 6903−6915.

P50. T. Isono; N. Kawakami; K. Watanabe; K. Yoshida; **I. Otsuka**; H. Mamiya; H. Ito; T. Yamamoto; K. Tajima; R. Borsali; T. Satoh "Microphase Separation of Carbohydrate-Based Star-Block Copolymers with Sub-10 nm Periodicity" *Polym. Chem.*, **2019**, *10*, 1119−1129.

P49. A. Granada; **I. Otsuka**; T. Caon; M. A. S. Silvab; V. Soldi; R. Borsali "Novel Hybrid Block Copolymer Nanocarrier Systems to Load Lipophilic Drugs Prepared by Microphase Inversion Method" *J. Polym. Res.*, **2017**, *24*, 226.

P48. **I. Otsuka**; N. Nilsson; D. Suyatin; I. Maximov; R. Borsali "Carbohydrate-based Block Copolymer Systems: Directed Self-Assembly for Nanolithography Applications" *Soft Matter*, **2017**, *13*, 7406−7411.

P47.* **I. Otsuka***; C. N. Njinang; R. Borsali* "Simple Fabrication of Cellulose Nanofibers via Electrospinning of Dissolving Pulp and Tunicate" *Cellulose*, **2017**, *24*, 3281−3288.

P46. C. M. Noronha; **I. Otsuka**; C. Bouilhac; C. Rochas; P. L. M. Barreto; R. Borsali "Self-assembly of Maltoheptaose-*b*-PMMA Block Copolymer Systems: 10 nm Resolution in Thin Film and Bulk States" *Carbohydr. Polym.*, **2017**, *170*, 15–22.

P45. Y. Sakai-Otsuka; S. Zaioncz; **I. Otsuka**; S. Halila; P. Rannou; R. Borsali "Self-Assembly of Carbohydrate-*block*-Poly(3-hexylthiophene) Diblock Copolymers into Sub-10 nm Scale Lamellar Structures" *Macromolecules*, **2017**, *50*, 3365–3376.

P44. C.-C. Hung; Y.-C. Chiu; H.-C. Wu; C. Lu; C. Bouilhac; **I. Otsuka**; S. Halila; R. Borsali; S.-H. Tung; W.-C. Chen "Nanostructure-Controlled Stretchable Resistive Memory Devices based on Carbohydrate-*block*-Polyisoprene Block Copolymers" *Adv. Funct. Mater.*, **2017**, *27*, 1606161.

P43. T. M. Popiolski; **I. Otsuka**; S. Halila; E. C. Muniz; V. Soldi; R. Borsali "Preparation of Polymeric Micelles of Poly(Ethylene Oxide-b-Lactic Acid) and Their Encapsulation with Lavender Oil" *Mat. Res.*, **2016**, *19*, 1356−1365.

P42. T. Isono; K. Miyachi; Y. Satoh; R. Nakamura; Y. Zhang; **I. Otsuka**; K. Tajima; T. Kakuchi; R. Borsali; T. Satoh "Self-Assembly of Maltoheptaose-*block*-polycaprolactone Copolymers: Carbohydrate-Decorated Nanoparticles with Tunable Morphology and Size in Aqueous Media" *Macromolecules*, **2016**, *49*, 4178−4194.

P41. K. M. Zepon; **I. Otsuka**; C. Bouilhac; E. C. Muniz; V. Soldi; R. Borsali "Self-Assembly of Oligosaccharide-*b*-PMMA Block Copolymersystems: Glyco-Nanoparticles and Their Degradation under UV Exposure" *Langmuir*, **2016**, *32*, 4538–4545.

P40. L. Mazzarino; G. L.-Neckel; L. dos Santos Bubniak; F. Ourique; **I. Otsuka**; S. Halila; R. C. Pedrosa; M. C. S.-Silva; E. L.-Senna; E. C. Muniz; R. Borsali "Nanoparticles Made from Xyloglucan-*block*-Polycaprolactone Copolymers: Safety Assessment for Drug Delivery" *Toxicol. Sci.*, **2015**, *147*, 104−115.

P39. K. M. Zepon; **I. Otsuka**; C. Bouilhac; E. C. Muniz; V. Soldi; R. Borsali "Glyco-Nanoparticles Made from Self-Assembly of Maltoheptaose-*block*-Poly(Methyl Methacrylate): Micelle, Reverse Micelle and Encapsulation" *Biomacromolecules*, **2015**, *16*, 2012−2024.

P38. T. Isono; **I. Otsuka**; S. Halila; R. Borsali; T. Kakuchi; T. Satoh "Sub-20 nm Microphase-Separated Structures in Hybrid Block Copolymers Consisting of Polycaprolactone and Maltoheptaose" *J. Photopolym. Sci. Technol.*, **2015**, *28*, 635–642.

P37. D. Togashi; **I. Otsuka**; R. Borsali; A. Narumi; S. Kawaguchi "Synthesis of Maltopentaose-Conjugated Surface-Active Styrenic Monomers and Their Micellar Homopolymerization in Water" *J. Polym. Sci.; Part A: Polym. Chem.*, **2015**, *53*, 1671–1679.

P36. **I. Otsuka**; Y. Zhang; T. Isono; C. Rochas; T. Kakuchi; T. Satoh; R. Borsali "Sub-10 nm Scale Nanostructures in Self-Organized Linear Di- and Triblock Copolymers and Miktoarm Star Copolymers Consisting of Maltoheptaose and Polystyrene" *Macromolecules* **2015**, *48*, 1509−1517.

P35. D. Togashi; **I. Otsuka**; R. Borsali; S. Kawaguchi; A. Narumi "Maltopentaose-Conjugated Thermoresponsive Block Copolymer: Precision Synthesis through RAFT Polymerization of *N*,*N*-Diethylacrylamide" *Chem. Lett.* **2015**, *44*, 428−430.

P34. D. Togashi; **I. Otsuka**; R. Borsali; K. Takeda; K. Enomoto; S. Kawaguchi; A. Narumi "Maltopentaose-Conjugated CTA for RAFT Polymerization Generating Nanostructured Bioresource-Block Copolymer" *Biomacromolecules* **2014**, *15*, 4509−4519.

P33. Y.-C. Chiu; **I. Otsuka**; S. Halila; R. Borsali; W.-C. Chen "High-Performance Nonvolatile Transistor Memories of Pentacence Using the Green Electrets of Sugar-based Block Copolymers and Their Supramolecules" *Adv. Funct. Mater.* **2014**, *24*, 4240−4249.

P32. L. Mazzarino; **I. Otsuka**; S. Halila; L. dos S. Bubniak; S. Mazzucco; M. C. Santos-Silva; E. Lemos-Senna; R. Borsali "Xyloglucan-block-Poly(ε-Caprolactone) Copolymer Nanoparticles Coated with Chitosan as Biocompatible Mucoadhesive Drug Delivery System" *Macromol. Biosci.* **2014**, *14*, 709−719.

P31. **I. Otsuka**; M. Osaka; Y. Sakai; C. Travelet; J.-L. Putaux; R. Borsali "Self-Assembly of Maltoheptaose-block-Polystyrene into Micellar Nanoparticles and Encapsulation of Gold Nanoparticles" *Langmuir* **2013**, *29*, 15224−15230.

P30. T. Isono; **I. Otsuka**; D. Suemasa; C. Rochas; T. Satoh; R. Borsali; T. Kakuchi "Synthesis, Self-Assembly, and Thermal Caramelization of Maltoheptaose-Conjugated Polycaprolactones Leading to Spherical, Cylindrical, and Lamellar Morphologies" *Macromolecules* **2013**, *46*, 8932−8940.

P29. T. Isono; Y. Kondo; **I. Otsuka**; Y. Nishiyama; R. Borsali; T. Kakuchi; T. Satoh "Synthesis and Stereocomplex Formation of Star-Shaped Stereoblock Polylactides Consisting of Poly(L-lactide) and Poly(D-lactide) Arms" *Macromolecules* **2013**, *46*, 8509−8518.

P28. S. Tallegas; T. Baron; G. Gay; C. Aggrafeil; B. Salhi; T. Chevolleau; G. Cunge; A. Bsiesy; R. Tiron; X. Chevalier; C. Navarro; K. Aissou; **I. Otsuka**; S. Halila; S. Fort; R. Borsali "Block Copolymer Technology Applied to Nanoelectronics" *Phys. Status Solidi C* **2013**, *10*, 1195−1206.

P27. **I. Otsuka**; S. Tallegas; Y. Sakai; C. Rochas; S. Halila; S. Fort; A. Bsiesy; T. Baron; R. Borsali "Control of 10 nm Scale Cylinder Orientation in Self-Organized Sugar-Based Block Copolymer Thin Films" *Nanoscale* **2013**, *5*, 2637−2641.

P26. T. Isono; **I. Otsuka**; Y. Kondo; S. Halila; S. Fort; C. Rochas; T. Sato; R. Borsali; T. Kakuchi "Sub-10 nm Nano-Organization in AB_2- and AB_3- type Miktoarm Star Copolymers Consisting of Maltoheptaose and Polycaprolactone" *Macromolecules* **2013**, *46*, 1461−1469.

P25. **I. Otsuka**; T. Isono; C. Rochas; S. Halila; S. Fort; T. Satoh; T. Kakuchi, R. Borsali "10 nm Scale Cylinder-Cubic Phase Transition Induced by Caramelization in Sugar-Based Block Copolymers" *ACS Macro Lett.* **2012**, *1*, 1379–1382.

P24. J. D. Cushen[†]; **I. Otsuka**[†]; C. M. Bates; S. Halila; S. Fort; C. Rochas; J. A. Easley; E. L. Rausch; A. Thio; R. Borsali; C. G. Willson; C. J. Ellison "Oligosaccharide/Silicon-Containing Block Copolymers with 5 nm Features for Lithographic Applications" *ACS Nano* **2012**, *6*, 3424–3433. **[†]These authors contributed equally to this work.**

P23. **I. Otsuka**; C. Travelet; S. Halila; S. Fort; I. P.-Paintrand; A. Narumi; R. Borsali "Thermoresponsive Self-assemblies of Cyclic and Branched Oligosaccharide-block-Poly(N-Isopropylacrylamide) Diblock Copolymers into Nanoparticles" *Biomacromolecules* **2012**, *13*, 1458–1465.

P22. S. M. Modolon; **I. Otsuka**; S. Fort; E. Minatti; R. Borsali; S. Halila "Sweet Block Copolymer Nanoparticles: Preparation and Self-Assembly of Fully Oligosaccharide-Based Amphiphile" *Biomacromolecules* **2012**, *13*, 1129–1135.

P21. L. Mazzarino; C. Travelet; S. O.-Murillo; **I. Otsuka**; I. P.-Paintrand; E. L.-Senna; R. Borsali "Elaboration of chitosan-coated nanoparticles loaded with curcumin for mucoadhesive applications" *J. Colloid Interface Sci.* **2012**, *370*, 58–66.

P20. C. Zhang; H. Wang; G. Su; R. Li; X. Shen; S. Zhang; Q. Geng; F. Liu; **I. Otsuka**; T. Satoh; T. Kakuchi "Synthesis and Conformation Effects of Poly(phenylacetylene)s Having Chiral and Racemic Polylactide" *Polym. Int.* **2012**, *61*, 1158–1162.

P19. M. R. Mauricio; **I. Otsuka**; R. Borsali; C. L. Petzhold; T. S.P. Cellet; G. Maria de Carvalho; A. F. Rubira "Synthesis of Star Poly(*N*-isopropylacrylamide) by β-Cyclodextrin Core Initiator via ATRP Approach in Water" *React. Funct. Polym.* **2011**, *71*, 1160–1165.

P18. K. Aissou; **I. Otsuka**; C. Rochas; S. Fort; S. Halila; R. Borsali "Nano-Organization of Amylose-b-Polystyrene Block Copolymer Films Doped with Bipyridine" *Langmuir* **2011**, *27*, 4098–4103.

P17. **I. Otsuka**; B. Blanchard; R. Borsali, A. Imberty, T. Kakuchi "Enhancement of Plant and Bacterial Lectin Binding Affinity by Three-dimensional Organized Cluster Glycosides Constructed on Helical Poly(phenylacetylene) Backbones" *ChemBioChem* **2010**, *11*, 2399–2408.

P16. R. Sakai; T. Yonekawa; **I. Otsuka**; R. Kakuchi; T. Satoh; T. Kakuchi "Host-guest complexation-triggered chiroptical change of poly(phenylacetylene)s bearing binaphthocrown ether moieties on the main chain" *J. Polym.. Sci.; Part A, Polym. Chem.* **2010**, *48*, 1197–1206.

P15. **I. Otsuka**; K. Fuchise; S. Halila; S. Fort; K. Aissou; I. P.-Paintrand; Y. Chen; A. Narumi; T. Kakuchi; R. Borsali "Thermo-responsive Vesicular Morphologies Obtained by Self-assemblies of Hybrid Oligosaccharide-block-Poly(*N*-Isopropylacrylamide) Copolymer Systems" *Langmuir* **2010**, *26*, 2325–2332.

P14. R. Kakuchi; S. Nagata; Y. Tago; R. Sakai; **I. Otsuka**; T. Satoh; T. Kakuchi "Efficient Anion Recognition Property of Three Dimensionally Clustered Amide Groups Organized on a Poly(phenylacetylene) Backbone" *Macromolecules* **2009**, *42*, 1476–1481.

P13. R. Kakuchi; S. Nagata; R. Sakai; **I Otsuka**; H. Nakade; T. Satoh; T. Kakuchi "Size-specific, Colorimetric Detection of Counteranions by Using Helical Poly(phenylacetylene) Conjugated to L-leucine Groups through Urea Acceptors" *Chem. Eur. J.* **2008**, *14*, 10259–10266.

P12. **I. Otsuka**; R. Sakai; R. Kakuchi; T. Satoh; T. Kakuchi. "Chiroptical Switching System Based on the Host-Guest Interaction Between Metal Cations and Poly(phenylacetylene)s Bearing Polycarbohydrate Ionophore" *Eur. Polym. J.* **2008**, *44*, 2971–2979.

P11. **I. Otsuka**; T. Hongo; H. Nakade; A. Narumi; R. Sakai; T. Satoh; H. Kaga; T. Kakuchi. "Chiroptical and Lectin Recognition Properties of Glycoconjugated Poly(phenylacetylene)s Featuring Variable Saccharide Functionalities." *Macromolecules* **2007,** *40*, 8930–8937.

P10. S. Sato; T. Nakamura; S. Nitobe,; T. Kiba; K. Hosokawa; T. Kasajima; **I. Otsuka**; S. Akimoto; T. Kakuchi " Structure and Excitation Relaxation Dynamics of Dimethylanthracene Dimer in a γ -cyclodextrin Nanocavity in Aqueous Solution." *J. Phys. Chem. B*, **2006**, *110*, 21444–21449.

P9. A. Narumi; Y. Miura; **I. Otsuka**; S. Yamane; Y. Kitajyo; T. Satoh; A. Hirao; N. Kaneko; H. Kaga; T. Kakuchi "End-functionalization of Polystyrene by Malto-oligosaccharide Generating Aggregation-tunable Polymeric Reverse Micelle." *J. Polym. Sci.; Part A: Polym. Chem*. **2006**, *44*, 4864–4879.

P8. A. Narumi; **I. Otsuka**; T. Matsuda; Y. Miura; T. Satoh; N. Kaneko; H. Kaga; T. Kakuchi "Glycoconjugated Polymer: Synthesis and Characterization of Poly(vinyl saccharide)-block-polystyrene-block-poly(vinyl saccharide) as an Amphiphilic ABA Triblock Copolymer." *J. Polym. Sci.; Part A: Polym. Chem*. **2006**, *44*, 3978–3985.

P7. R. Sakai; **I. Otsuka**; R. Kakuchi; T. Satoh; T. Kakuchi. "Synthesis, Inversion, and Chiral Discrimination of Helical Polymers Based on the Host-guest Complexation." *Kobunshi Ronbunshu* **2006**, 63, 315–324.

P6. T. Satoh; **I. Otsuka**; R. Sakai; K. Saitoh; S. Umeda; K. Tsuda; H. Hashimoto; T. Kakuchi "Chromatographic Application of 3,4-di-O-alkyl-(1→6)-2,5-anhydro-D-glucitol for Separation of Alkali and Alkaline Earth Metal Ions." *Polymer J.* **2006**, *38*, 490–494.

P5. R. Sakai; **I. Otsuka**; T. Satoh; R, Kakuchi; H. Kaga; T. Kakuchi "Thermoresponsive On-Off Switching of Chiroptical Property Induced in Poly(4'-ethynylbenzo-15-crown-5)/α -Amino Acid System." *Macromolecules* **2006**, *39*, 4032–4037.

P4. A. Narumi; H. Kaga; Y. Miura; **I. Otsuka**; T. Satoh; N. Kaneko; T. Kakuchi "Polystyrene Microgel Amphiphiles with Maltohexaose. Synthesis, Characterization, and Potential Applications" *Biomacromolecules* **2006**, *7*, 1496–1501.

P3. R. Sakai; **I. Otsuka**; T. Satoh; R. Kakuchi; H. Kaga; T. Kakuchi "Chiral Discrimination of a Helically Organized Crown Ether Array Parallel to the Helix Axis of Polyisocyanate." *J. Polym. Sci.; Part A: Polym. Chem*., **2006**, *44*, 325–334.

P2. **I. Otsuka**; R. Sakai; T. Satoh; R. Kakuchi; H. Kaga; and T. Kakuchi "Metal-Cation-Induced Chiroptical Switching for Poly(phenylacetylene) Bearing a Macromolecular Ionophore as a Graft Chain" *J. Polym. Sci.; Part A: Polym. Chem*., **2005**, *43*, 5855–5863.

P1. R. Kakuchi; R. Sakai; **I. Otsuka**; T. Satoh; H. Kaga; and T. Kakuchi "Synthesis and Helicity Induction of Poly(phenylacetylene) Derivatives Bearing a Crown Cavity on the Main Chain" *Macromolecules*, **2005**, *38*, 9441–9447.

Book chapter:

BC1.* **I. Otsuka***; R. Borsali "Electrospun Biomaterials" in *Bioelectrochemistry. Design and Applications of Biomaterials*; Cosnier, S., Ed.; Walter de Gruyter GmbH: Berlin/Boston, **2019**; pp 45–58. ISBN: 978-3-11-057052-6.

Patent:

PA1. C. J. Ellison; J. Cushen; **I. Otsuka**; C. G. Willson; C. M. Bates; J. A. Easley; R. Borsali; S. Fort; S. Halila "Oligosaccharide/silicon-containing block copolymers for lithography applications" Pub. No.: WO/2012/177839

Peer-reviewed conference proceedings:

PC12.* **I. Otsuka*** **"**Electrospinning of a Photo-responsive Cellulose Derivative: Towards Smart Fibrous Materials" Book of abstract: The 6th EPNOE International Polysaccharide Conference, 21–25 October 2019, Aveiro, Portugal, pp 236. Communication ID: sciencesconf.org:epnoe2019:280398.

PC11.* **I. Otsuka***; C. J. Barrett "Electrospinning of a Photo-responsive Cellulose Derovatove: towards Smart Nano/micro Fibrous Materials" Booklet of abstract: Euro Polymer Conference 2019 (EUPOC 2019) Electrospinning and related techniques: From design to production of advanced polymer materials and devices, 12–16 May 2019, Como, Italy, pp 49.

PC10.* **I. Otsuka***; G. Garg; C. N. Njinang; R. Borsali "Preparation of core-shell nanofibers having periodic internal structures via coaxial electrospinning of carbohydrate-based block copolymers and their self-assemblies" Abstract book: Electrospinning for Energy 2016, 22–24 July 2016, Montpellier, France, pp 49.

PC9. **I. Otsuka**, S. Halila, C. Travelet, C. Rochas, R. Borsali "Self-Assemblies of Poly-/Oligosaccharide-Based Block Copolymer Systems: Glyco-Nanoparticles & High-Resolution Nano-Structured Thin Films" Program & Abstracts: 2nd International Conference on Bioinspired and Biobased Chemistry & Materials (NICE 2014), 15–17 October 2014, Nice, France, pp 275.

PC8. J. D. Cushen; **I. Otsuka**; C. M. Bates; S. Halila; S. Fort; R. Borsali; J. A. Easley; E. L. Rausch; A. Thio; C. J. Ellison.; C. G. Willson, "Oligosaccharide/silicon-containing block copolymers for nanolithography" *PMSE Prepr.* American Chemical Society, **2012**, *106*, pp 618-619.

PC7. **I. Otsuka**; K. Fuchise; A. Narumi; S. Halila; S. Fort; T. Kakuchi; R. Borsali "Hybrid Oligosaccharide-poly(N-isopropylacrylamide) block Copolymer Systems:"Click" Chemistry and Self-assembly properties". Abstract: Euro Polymer Conference 2009 (EUPOC 2009) "Click" – Methods in Polymer and Materials Science, 31 May–4 June 2009, Gargnano, Italy, pp OC-19.

PC6. R. Konosu; T. Hongo; **I. Otsuka**; A. Narumi; T. Satoh; A. Deffieux; A. Hirao; T. Kakuchi "Synthesis and characterization of poly(P-phenylene ethynylene) bearing maltohexaose" *Polym. Prepr.* American Chemical Society, **2008**, *49*, pp 607-608.

PC5. T. Hongo; **I. Otsuka**; A. Narumi; R. Sakai; T. Satoh; H. Kaga; T. Kakuchi. "Synthesis and chiroptical property of poly(phenylacetylene) bearing maltohexaose." *Polym. Prepr.* American Chemical Society, **2007,** *48*, pp 119-120.

PC4. R. Kakuchi; S. Nagata; R. Sakai; T. Yonekawa; **I. Otsuka**; T. Satoh; T. Kakuchi "Synthesis and anion sensing property of poly(phenylacetylene) bearing urea derivative of L-leucine as pendant." *Polym. Prepr.* American Chemical Society, **2007**, *48*, pp 115-116.

PC3. **I. Otsuka**; T. Hongo; A. Narumi; R. Sakai; T. Satoh; H. Kaga; T. Kakuchi. "Anomer-selective synthesis of poly(p-ethynylphenyl hexopyranoside)s: effects of anomeric configuration on their stimulus response and lectin detection." *Polym. Prepr*. American Chemical Society, **2007**, *48*, pp 82-83.

PC2. R. Sakai; T. Satoh; **I. Otsuka**; R. Kakuchi; H. Kaga; T. Kakuchi "Synthesis of Polyisocyanate Bering Crown Ether Via Asymmetric Polymerization With Chiral Initiator." *Polym. Prepr.*, American Chemical Society, **2005**, *46*, pp 1068-1069.

PC1. **I. Otsuka**; T. Satoh; R. Sakai; R. Kakuchi; H. Kaga; and T. Kakuchi "Helix-helix Transition for Poly(Phenylacetylene) Bearing Macromolecular Ionophore via the Host-guest Complexation with Metal Cations." *Polym. Prepr.*, American Chemical Sciety, **2005**, *46*, pp 911-912.

Invited lectures at international conferences:

IL11.* **I. Otsuka*** "Electrospinning of Photo-responsive Polysaccharide Derivatives: Towards Smart Fibrous Materials" International Congress on Advanced Materials Sciences and Engineering 2019 (AMSE-2019), ANA Crowne Plaza Hotel, Osaka, Japan, 24/07/2019.

IL10.* **I. Otsuka*** "Preparation of Multi-stimuli-tesponsive Colloids via RAFT Polymerization-induced Thermal Self-assembly" the 2nd Asian-French Workshop on Polymer Science (AFWPS 2019), Hokkaido University, Sapporo, Japan, 19/07/2019.

IL9.* **I. Otsuka*** "Design and Synthesis of Carbohydrate-based Functional Materials" UC Santa Barbara–Grenoble Workshop on Functional Materials: New Developments and Advanced Characterization, UC Santa Barbara, USA, 18/04/2019.

IL8.* **I. Otsuka*;** X. Zhang; F. M. Winnik "Preparation of Multi-stimuli-responsive Active Colloids via Polymerization-induced Thermal Self-assembly" 5th French Brazilian Meeting on Polymers (FBPOL 2018), Acquamar Hotel, Florianopolis, Brazil, 19/04/2018.

IL7.* **I. Otsuka*** "Self-organization of Carbohydrate-based Block Copolymers" International Symposium on Advanced Polymeric Materials 2017 (ISAPM 2017), Changchun University of Science and Technology, Changchun, China, 28/08/2017.

IL6. K. M. Zepon; **I. Otsuka**; C. Bouilhac; V. Soldi; R. Borsali " Glyco-Nanoparticles Made from Self-Assembly of Maltoheptaose-block-Poly(methyl methacrylate): Micelle, Reverse Micelle, and Encapsulation" France-Japan Joint Seminar on Functional Block Copolymer 2015 (FJJS 2015), CERMAV, Grenoble, France, 21/09/2015.

IL5. **I. Otsuka**; Y. Zhang; T. Isono; S. Halila; C. Rochas; T. Kakuchi; T. Satoh; R. Borsali "Sub-10 nm Scale Nanostructures in Self-Organized Linear AB- and ABA-Block Copolymers and A_2B-Miktoarm Star Copolymers Consisting of Maltoheptaose and Polystyrene" Japan-France Joint Seminar on Functional Block Copolymer 2015 (JFJS 2015), Hokkaido University, Sapporo, Japan, 02/06/2015.

IL4. **I. Otsuka**; S. Halila; S. Fort; C. Travelet; C. Rochas; R. Borsali "Synthesis and Self-assembly of Poly-/Oligosaccharide Containing Block Copolymer Systems" 4th French Brazilian Meeting on Polymer (FBPOL 2014), Jurere Beach Village, Florianopolis, Brazil, 27/11/2014.

IL3. **I. Otsuka**; S. Halila; C. Travelet; C. Rochas; R. Borsali "Self-Assembly of Sugar-Containing Block Copolymers: Glyco-Nanoparticles and High-Resolution Nano-Structured Thin Films" 5th Workshop of Young European Scientists (YES2014), Jagiellonian University, Cracow, Poland, 08/09/2014. I was nominated by European Polymer Federation (EPF) National Representative from France.

IL2. **I. Otsuka**; S. Halila; C. Travelet; L. Mazzarino; R. Borsali "Synthesis of Hybrid Block Copolymers: Glyco-nanoparticles & Encapsulations" Japan-France Joint Seminar on Functional Block Copolymer 2014 (JFJS 2014), Hokkaido University, Sapporo, Japan, 21/05/2014.

IL1. **I. Otsuka**; S. Halila; S. Fort; R. Borsali ""Sweet" Nanoparticles & Nano-structured Glycofilms". "Bioinspired nanosystems and nanomaterials" NanoSWEC Workshop, IECB University of Bordeaux, France, 14/11/2011.

Invited seminars at research institutes/universities:

IS11. **I. Otsuka** "バイオマテリアル等への応用を目指した多刺激応答性高分子材料の創製 (Preparation of Multi-Stimuli-Responsive Polymeric Materials towards Applications for Biomaterials)" Yamagata University, Yonezawa, Japan, 27/11/2019.

IS10. **I. Otsuka** "Self-assembly of Poly-/Oligosaccharide Containing Block Copolymers: Glyco-Nanoparticles and Nanostructured Glyco-Thin Films" Changchun University of Science and Technology, Changchun, China, 20/09/2016.

IS9. **I. Otsuka** "Synthesis and Self-assembly of Poly-/Oligosaccharide Containing Block Copolymers: Glyco-Nanoparticles & High-Resolution Nano-Structured Thin Films" Journées des CR1 de l'Institut de chimie du CNRS, l'auditorium du siège du CNRS, Paris, France, 16/06/2015.

IS8. **I. Otsuka**; S. Halila; S. Fort; C. Travelet; C. Rochas; R. Borsali "Synthesis and Self-Organizations of Poly-/Oligosaccharide-Containing Block Copolymers" Maringa State University, Maringa, Brazil, 21/11/2014.

IS7. **I. Otsuka** "Thermoresponsive Self-Assemblies of Oligosaccharide-block-PNIPAM Block Copolymers into Nanoparticles" The Hong Kong Polytechnic University, Hong Kong, China, 18/10/2012.

IS6. **I. Otsuka** "Creation of sub-10 nm patterning by self-assembly of oligosaccharide-based hybrid block copolymers for lithographic applications" Yamagata University, Yonezawa, Japan, 15/05/2012.

IS5. **I. Otsuka** "Nanoparticles & Nano-structured Films of Oligosaccharide-based Hybrid Block Copolymers" Chemistry Department, Universidade Federal de Santa Catarina, Brazil, 04/12/2011.

IS4. **I. Otsuka** **"**Nano-structured "Sweet" Thin Films of Oligosaccharide-based Hybrid Block Copolymers". Yamagata University, Japan, 27/10/2011.

IS3. **I. Otsuka** "Thermo-responsive Nanoparticles Obtained by Self-assemblies of Oligosaccharide-block-PNIPAM Copolymer Systems". Sarrià Chemical Institute, Ramon Llull University, Spain, 02/2011.

IS2. **I. Otsuka** "Synthesis and Physicochemical Properties of Saccharide-based "Hybrid" Block Copolymers". Chemistry Department, Universidade Federal de Santa Catarina, Brazil, 12/2010.

IS1. **I. Otsuka** "Thermo-responsive Nanoparticles Obtained by Self-assemblies of Oligosaccharide-b-PNIPAM Copolymer Systems". Chemistry Department, Universidade Federal de Santa Catarina, Brazil, 12/2010.

Oral presentations (from latest to oldest):

OP10.* **I. Otsuka*** "Electrospinning of a Photo-responsive Cellulose Derivative: Towards Smart Fibrous Materials" EPNOE (European Polysaccharide Network of Excellence) 6th International Polysaccharide Conference, OC158, Aveiro, Portugal, 25/10/2019.

OP9.* **I. Otsuka***; C. J. Barrett "Electrospinning of a Photo-responsive Cellulose Derivative: toward Smart Nano/Micro Fibrous Materials" Euro Polymer Conference 2019 (EUPOC 2019), OC-37, Como, Italy, 15/05/2019.

OP8. M. S. Gestranius; **I. Otsuka**; S. Halila; R. Borsali; T. Tammelin "High Resolution Self-Assembled Patterns on Flexible Nanocellulose Film" 257th American Chemical Society National Meeting & Exposition, CELL-0441, Orlando, FL, United States, 04/05/2019.

OP7.* **I. Otsuka***; X. Zhang; F. M. Winnik "Preparation of Multi-Stimuli-Responsive Active Colloids via RAFT Polymerization-Induced Thermal Self-Assembly" 256th American Chemical Society National Meeting & Exposition, POLY-23, Boston, MA, United States, 19/08/2018.

OP6.* **I. Otsuka***; G. Garg; R. Borsali "Preparation of Nanofibers having Periodic Internal Structures Made from Carbohydrates via Electrospinning of Glycoconjugate Polymers" 251th American Chemical Society National Meeting & Exposition, PMSE-604, San Diego, CA, United States, 17/03/2016.

OP5. T. Gomez; **I. Otsuka**; C. Bouilhac; E. Reynaud; W.-C. Chen; H. Sato; Y. Seino; T. Azuma; R. Borsali "Carbohydrate-based Block Copolymer Self-Assemblies: Sub-10nm Highly Nanostructured Thin Films and DSA Patterning" SPIE Advanced Lithography, San Jose Marriott and San Jose Convention Center San Jose, CA, United States, 24/02/2016.

OP4. S. Halila; **I. Otsuka**; R. Borsali "Well-defined sugar-based amphiphilic copolymers: From controlled architectures to nanostructured materials" American Chemical Society National Meeting & Exposition, CELL-274, Denver, CO, United States, 24/03/2015.

OP3. **I. Otsuka**; S. Halila; C. Travelet; C. Rochas; R. Borsali "Self-Assemblies of Poly-/Oligosaccharide-Based Block Copolymer Systems: Glyco-Nanoparticles & High-Resolution Nano-Structured Thin Films" 2nd International Conference on Bioinspired and Biobased Chemistry & Materials (NICE 2014), Le Negresco, Nice, France, 16/10/2014.

OP2. **I. Otsuka**; K. Fuchise; S. Halila; S. Fort; K. Aissou; I. Pignot-Paintrand; Y. Chen; T. Kakuchi; R. Borsali "Thermo-responsive Vesicular Morphologies Obtained by Self-assemblies of Oligosaccharide-block-poly(N-isopropylacrylamide) Copolymer Systems". 11èmes Journées Francophones des Jeunes Physico-Chimistes, Autrans, France, 18/10/2010.

OP1. **I. Otsuka**; K. Fuchise;A. Narumi; S. Halila; S. Fort; T. Kakuchi; R. Borsali "Hybrid Oligosaccharide-poly(N-isopropylacrylamide) block Copolymer Systems:"Click" Chemistry and Self-assembly properties". Euro Polymer Conference 2009 (EUPOC 2009), OC-19, Gargnano, Italy, 07/2009.

Poster presentations (from latest to oldest):

PP21.* **I. Otsuka*** "バイオマテリアルへの応用を目指した光応答性多糖電解紡糸材料の創製 (Electrospinning of Photo-responsive Polysaccharide Derivatives: Towards Smart Biomaterials)" The 41st Annual Meeting of the Japanese Society for Biomaterials, P188, Tsukuba International Congress Center, Ibaraki, Japan, 24-26/11/2019.

PP20. A. Löfstrand, D. Suyatin, N. Nilsson, **I. Otsuka**, A. Kvennefors, J. Ring, R. Borsali, I. Maximov "Sub-10 nm Block Copolymer Lithography: Sequential Infiltration Synthesis into Poly(Styrene)-block-Maltoheptaose", P4, CNR Congress Center, Milano, Italy, 17-18/10/2019.

PP19.* **I. Otsuka***; C. J. Barrett "Light-Harvesting Polysaccharide Nanofibers: Toward Sunlight-Driven Smart Green Nanomaterials" 38th Canadian High Polymer Forum, Glen House Resort, Gananoque, ON, Canada, 01/08/2018.

PP18. A. Löfstrand; D. Suyatin; B. Landeke-Wilsmark; N. Nilsson; **I. Otsuka**; A. Kvennefors; J. Ring; R. Borsali; I. Maximov "Selective Infiltration into Polystyrene-block-Maltoheptaose Block Copolymer for Ultrahigh Resolution Pattern Transfer" 43rd International Conference on Micro and Nano Engineering (MNE 2017), Braga, Portugal, 18-22/09/2017.

PP17. M. Cestari; **I. Otsuka**; E. C. Muniz; R. Borsali "Preparation and Characterization of Silk Fibroin, Chondroithin Sulfate and Silver Sulfadiazine Nanofibers through Electrospinning Method for Tissue Engineering". 4th International Soft Matter Conference, P02-233, Grenoble, France, 15/09/2016.

PP16.* **I. Otsuka***; G. Garg; C. N. Njinang; R. Borsali "Preparation of Core-Shell Nanofibers having Periodic Internal Structures via Coaxial Electrospinning of Carbohydrate-Based Block Copolymers and their Self-Assemblies" Electrospinning for Energy 2016, Montpellier, France, 22-24/07/2016.

PP15. **I. Otsuka**; S. Halila; R. Borsali "Glyco-Nanoparticles toward Nanobiological Applications: Synthesis and Controlled Self-Assembly of Poly-/Oligosaccharide containing Block Copolymers" 10th World Biomaterials Congress, P.2953, Montreal, Canada, 20/05/2016.

PP14. **I. Otsuka**; S. Halila; C. Travelet; F. Dubreuil; C. Rochas; R. Borsali "Self-Assemblies of Poly-/Oligosaccharide-Containing Block Copolymer Systems: Glyco-Nanoparticles & High-Resolution Nano-Structured Thin Films" ANR-JST the first Franco-Japanese symposium on "Molecular Technology", Eurosites George V, Paris, France, 09/03/2014.

PP13. **I. Otsuka**; T. Isono; C. Rochas; S. Halila; S. Fort; T. Satoh; T. Kakuchi; R. Borsali "10 nm Scale Microphase Transition Induced by Caramelization in Oligosaccharide-Based Block Copolymer Thin Films" 41e colloque national du Groupe Français des Polymères, Centre Technique du Papier, Saint-Martin d'Hères, France, 19-22/11/2012.

PP12. **I. Otsuka**; J. D. Cushen; S. Halila; S. Fort; C. J. Ellison, C. G. Willson; R. Borsali "Nano-structured "Sweet" Thin Films of Oligosaccharide/Silicon-containing Block Copolymers" Japan-Korea Joint Seminar 2011: Advanced Soft Nanomaterials (JKJS 2011), Hokkaido University, Sapporo, Japan, 31/10-01/11/2011.

PP11. **I. Otsuka**; K. Fuchise; S. Halila; S. Fort; K. Aissou; I. Pignot-Paintrand; Y. Chen; T. Kakuchi; R. Borsali "Thermo-responsive Vesicular Morphologies Obtained by Self-assemblies of Oligosaccharide-block-poly(N-isopropylacrylamide) Copolymer Systems". The 25th International Carbohydrate Symposium, Makuhari Messe International Convention Complex, Chiba, Japan, 01-06/08/2010.

PP10. R. Konosu; T. Hongo; **I. Otsuka**; A. Narumi; T. Satoh; A. Deffieux; A. Hirao; T. Kakuchi "Synthesis and characterization of poly(p-phenylene ethynylene) bearing maltohexaose" 235th ACS National Meeting, POLY-141, New Orleans, LA, United States, 6-10/04/2008.

PP9. **I. Otsuka**; T. Hongo; R. Sakai; A. Narumi; T. Satoh; H. Kaga; T. Kakuchi "Chiroptical and Lectin Recognition Properties of Poly(phenylacetylene)s Bearing D-Glucose and D-Galactose". International Symposium on Advanced Macromolecules and Nano-materials with Precisely Designed Architectures, PP-25, Sapporo, Japan, 04/10/2007.

PP8. T. Hongo; **I. Otsuka**; A. Narumi; R. Sakai; T. Satoh; H. Kaga;T. Kakuchi "Synthesis and chiroptical property of poly(phenylacetylene) bearing maltohexaose" 234th American Chemical Society National Meeting & Exposition, POLY-457, Boston, MA, USA, 19-23/08/2007.

PP7. R. Kakuchi; S. Nagata; R. Sakai; T. Yonekawa; **I. Otsuka**; T. Satoh; T. Kakuchi "Synthesis and anion sensing property of poly(phenylacetylene) bearing urea derivative of L-leucine as pendant" 234th American Chemical Society National Meeting & Exposition, POLY-455, Boston, MA, USA, 19-23/08/2007.

PP6. **I. Otsuka**; T. Hongo; A. Narumi; R. Sakai, T. Satoh; H. Kaga; T. Kakuchi "Anomer-selective synthesis of poly(p-ethynylphenyl hexopyranoside)s: effects of anomeric configuration on their stimulus response and lectin detection." 234th American Chemical Society National Meeting & Exposition, POLY-438, Boston, MA, USA, 19-23/08/2007.

PP5. **I. Otsuka**; T. Hongo; R. Sakai; A. Narumi; T. Satoh; H. Kaga; T. Kakuchi "Synthesis and Chiroptical Property of Helical Poly(phenylacetylene)s Bearing Saccharides". IUPAC International Symposium on Advanced Polymers for Emerging Technologies, 1A2-PO-003, Busan, Korea, 10-13/10/2006.

PP4. R. Sakai; T. Satoh; **I. Otsuka**; R. Kakuchi; H. Kaga; T. Kakuchi "Synthesis of polyisocyanate bearing crown ether via asymmetric polymerization with chiral initiator" 230th American Chemical Society National Meeting, POLY-170, Washington, DC, USA, 28/08-01/09/2005.

PP3. **I. Otsuka**; T. Satoh; R. Sakai; R. Kakuchi; H. Kaga; T. Kakuchi "Helix-helix transition for poly(phenylacetylene) bearing macromolecular ionophore via the host-guest complexation with metal cations" 230th American Chemical Society National Meeting, POLY-198, Washington, DC, USA, 28/08-01/09/2005.

PP2. **I. Otsuka**; R. Sakai; T. Satoh; R. Kakuchi; T. Kakuchi "Chiroptical Control for Poly(phenylacetylene) Bearing Polycarbohydrate Ionophore via the Host-Guest Complexation with Metal Cations". 13th International SPACC-CSJ Symposium, P08, Sapporo, Japan, 03-05/08-2006.

PP1. **I. Otsuka**; R. Sakai; T. Satoh; R. Kakuchi; H. Kaga; T. Kakuchi "Metal Cation-Induced Helix Inversion for Poly(phenylacetylene) Bearing Polycarbohydrate Ionophore as Graft Chain". The 17th International Symposium on Chirality (ISCD-17), P55, Parma, Italy, 11-14/09/2005.