[15003]

高分子架橋反応を利用した粒子線の高解像度検出技術の開発

Development of high-resolution visualization method for single-ion tracks by taking advantage of polymer cross-linking reaction

学術論文（査読あり）

[1] M. Omichi, H. Marui, V. S. Padalkar, A. Horio, S. Tsukuda, M. Sugimoto, and S. Seki, “Fabrication of Thermoresponsive Nanoactinia Tentacles by a Single Particle Nanofabrication Technique” *Langmuir*, **31**, 11692–11700 (2015).

[2] S. Tsukuda, R. Takahasi, S. Seki, M. Sugimoto, A. Idesaki, M. Yoshikawa, and S. Tanaka, “Fabrication of Pt nanoparticle incorporated polymer nanowires by high energy ion and electron beam irradiation” *Radiat. Phys. Chem.*, **118**, 16–20 (2016).

[3] W. Tuchinda, K. Enomoto, T. Sakurai, V. S. Padalkar, H. L. Cheng, M. T. Tang, A. Horio, D. Sakamaki, M. Omichi, A. Saeki, K. Kikuchi, Y. Hori, A. Chiba, Y. Saito, T. Kamiya, M. Sugimoto, and S. Seki, "Fabrication of 'Clickable' Polyfluorene Nanowires with High Aspect Ratio as Biological Sensing Platforms" *ACS Sensors* **1**, *in press* (2016). (DOI: 10.1021/acssensors.6b00070)

国際会議

[1] T. Sakurai, A. Horio, Y. Takeshita, S. Seki, “Observation of Nanowires via Ion Beam-Triggered Intra-Track Polymerization of π-Conjugated Molecules”, 25th Annual Meeting of MRS-J (2015), Hatoba Kaikan, Yokohama, Japan, 2015.12.8–10.

国内会議

[1] 堀尾明史, 櫻井庸明, 関　修平,「粒子線による芳香族アミンの線形固相重合とナノワイヤの形成」, 第 64 回高分子討論会, 東北大学, 仙台, 2015 年 9 月 15–17 日

[2] 櫻井庸明, 竹下友輝, 堀尾明史, 関　修平,「高エネルギー粒子線照射を利用した低分子重合/高分子架橋反応によるナノ構造体形成技術」, 第 64 回高分子討論会, 東北大学, 仙台, 2015 年 9 月 15–17 日

招待講演等

[1] S. Seki, “Low Dimensional Nanostructures Produced by High Energy Single Particle”,
International Conference on Nanostructuring by Ion Beams 2015 (ICNIB2015)
Hotel Amar, Agra, India, 2015.11.24.

解説・記事等

[1] “High Energy Charged Particles: Their Chemistry and Use as Versatile Tools for Nanofabrication”
S. Seki, T. Sakurai, M. Omichi, A. Saeki, D. Sakamaki
Springer-Verlag GmbH, **2015**, 09.　(ISBN-10: 4431556834, ISBN-13: 978-4-431-55683-1)