「講演予稿集」125 ページの原稿に誤りがありました。

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**2P017**

**Electrochemical attosyringe for cell analysis**

(Grad. Sch. of Eng., Tohoku Univ.[1] Grad. Sch. of Life Sci. Tohoku Univ[2]. Grad. Sch. of Env. studies Tohoku. Univ.[3]) ○M. Echigo[1], T. Yajima[2], K. Ino[1], T. Matsue[3], H. Shiku[1]

【Introduction】Two- and three-dimensional cultured cells show different gene expression, respectively. This difference is generated by culture conditions. Three-dimensional cultured cell aggregation is considered to show different gene expressions inside and outside cell aggregates. In this study, we fabricated electrochemical attosyringe [1] [2] as a cell analysis tool.

【Experiments】A schematic diagram of electrochemical attosyringe is shown in Fig.1. A glass capillary was fabricated with $CO_2$ laser puller. The capillary was filled with THATPBCl (Tetrahexylammonium tetrakis (4-chlorophenyl) borate) solution soluted by 1,2-dichroroethane as organic phase. A water phase was Milli-Q water. Working and reference electrodes were Ag/AgTPBCl and Ag/AgCl electrodes, respectively. A voltage applied to the system was -0.5 V to inject Milli-Q water. The voltage applied to the system was 1.0 V to eject Milli-Q water.

【Results and Discussion】Voltage control induced injection and ejection of Milli-Q water. In future work, we are investigating the collection of cell components to analyze gene expressions.

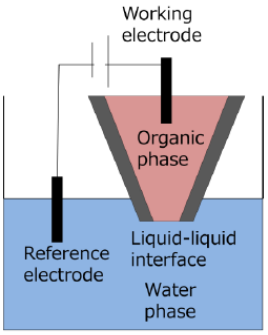


Fig. 1 Schematic diagram of electrochemical attosyringe.

【References】[1] F. O. Laforge et al., *PNAS*, 2007, **29**, 11895-11900
[2] Y. Nashimoto et al., *ACS Nano*, 2016, **10**, 6915-6922

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**1P117**

**Structure of hybrid nanoplate composed of amphiphilic polyhedral oligomeric silsesquioxane**

(Graduate School of Science and Engineering , Yamagata Univ.[1]・IMRAM , Tohoku Univ.[2]・Graduate School of Science and Engineering, Toyama Univ.[3]・Nagoya University Venture Business Laboratory[4]・Faculty of Science, Yamagata Univ.[5])
○Asami Akatsuka[1], Huie Zhu[2], Shunsuke Yamamoto[2], Masaya Mitsuishi[2], Tokuji Miyashita[2], Makoto Gemmei-Ide[3], Shusaku Nagano[4], Jun Matsui[5]

Polyhedral oligomeric silsesquioxane (POSS) is a unique hybrid compounds, these cubic structure with ~ 1 nm size is attractable for a building block to create highly ordered nanomaterials. Recently, we synthesized hybrid amphiphile composed of hydrophobic double-decker -shaped polyhedral silsesquioxane (DDSQ) with hydrophilic organic chains (2DEGNH-DDSQ) (Fig.1). Moreover we found that 2DEGNH-DDSQ formed a microrod at an air-water interface. In this paper, we reported that the microrod can be changed to nanosheet by compression the monolayer at constant pressure for a long time.

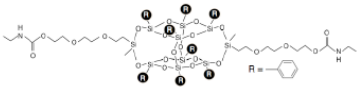
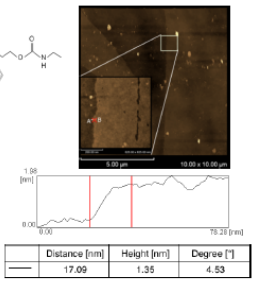


Fig.1 Structure of 2DEGNH-DDSQ.

Self-organization of the hybrid amphiphile was performed at an air-water interface. The 2DEGNH-DDSQ was spread onto an air-water interface and compressed at 7 mN/m for 10 hours. The monolayer was transferred onto a solid substrate using the Langmuir-Schaefer method and the morphology was observed by AFM. The AFM image of the monolayer transferred onto a silicon substrate showed a large two-dimensional (> 50 $\mu m^2$) plate with a monolayer thickness (Fig.2). Details of the structure such as presence and absence of hydrogen bond in the nanoplate will be further discussed.



| | Distance [nm] | Height [nm] | Degree [°] |
|---|---|---|---|
| — | 17.09 | 1.35 | 4.53 |

Fig.2 AFM image of 1 layer of 2DEGNH -DDSQ film transferred onto a solid substrate. Inset, expanded image of the selected area.

発表者様ならびに参加者の皆様、関係者の皆様にご迷惑をおかけしましたことを深くお詫び申し上げます。

公益社団法人 日本化学会東北支部