



ISSEI OTSUKA

From France to Finland

Project: **Smart textiles**

Research topic: **Chemistry**

Finnish Institution: **VTT (Espoo)**

French Institution: **CERMAV (Grenoble), CNRS**

Dates of mobility: **30/05/2022 to 03/06/2022**

Program: **Maupertuis Programme**



PRESENTATION

[Issei Otsuka](#) earned his PhD from [Hokkaido University](#) in September 2008. Immediately after PhD, he was awarded a postdoctoral fellowship of the [Japan Society for the Promotion Science](#) and moved to France. He is currently a tenured researcher of the French [National Centre for Scientific Research \(CNRS\)](#). He obtained his Research Habilitation Degree from [Grenoble Alpes University](#) in 2019 and started his independent research career. His research activity focusses on physical chemistry of polymer materials, notably on carbohydrate polymers towards nano-/bio-material applications. Since he joined the CNRS, he worked on one of the main research topics in [the Plant Macromolecule Research Center \(CERMAV\)](#), i.e. synthesis and self-assembly of carbohydrate-based block copolymers in solution (towards colloids) and solid states. During his 18 months sabbatical in Montreal in 2017-2018, he started new research topics dealing with stimuli-responsive active matter, i.e. multiresponsive colloids and fibers. Recently, he has been developing within his team an original theme of structuring polyaccharides by electrospinning, which leads to scientific productions in the field of biomedical applications including photo-responsive textiles and chiral resolution membranes.

ACTIVITIES IN FINLAND

During his visit at [VTT](#), Issei Otsuka took part of a scientific seminar organized by the host researchers [Dr. Tapio Mäkelä](#), [Prof. Dr. Tekla Tammelin](#), and [Ms. Marie Gestranus](#). He discussed collaboration with [Dr. Marja Vilkmán](#) and PhD students. Ms. Gestranus made the [Biomaterial Processing and Products](#) laboratory tour. Issei Otsuka could see their electrospinning instruments and have an opportunity to exchange some technical problems and solutions via discussions with their research engineers in the laboratory. He could also meet by chance with [Dr. Jukka Niskanen](#) (Senior Scientist at VTT) who was his former colleague in Montreal, and he had open discussions with Dr. Niskanen for future potential collaborations. Then he visited [Aalto University](#) in Espoo. He took part of another scientific seminar which was organized by the host researcher [Prof. Olli Ikkala](#). After the

seminar, Prof. Ikkala made a laboratory tour of the [Department of Applied Physics](#), Molecular Materials at Aalto University. They discussed future potential collaborations.