



演 題 : **Mystery of gel working on Contact Lenses**  
~**Chance & Necessity**~

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Menicon Co., Ltd. / Nagoya Institute of Technology

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場 所 : 理学部 7 号館 219 号室



要旨 : **Contact lenses** are the most frequent examples of industrial use of hydrogels. It has already been 60 years since their first use in Contact Lenses starting with 2-Hydroxy ethyl methacrylate (HEMA). Is it a completed area? The answer is “**No**”.

The material is still evolving through fusion of heterogeneous technologies and utilization of classical to advanced polymer science. Currently the mainstream research uses the so-called “**silicone hydrogel**” as a material for Lenses which is a copolymer of silicone-based monomer suitable for hard lenses and hydrophilic components. Low biocompatibility of the hydrophobic silicone component is a deficiency although silicone possess high permeability of gases. Therefore, control of the interfacial properties between the lenses and tear film and the nanoscale structure have become particularly important.

Therefore, it is necessary to advance towards the next level of technology by elucidating the detail mechanism for developing innovative products in future.

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