



KISHI LAB.

[Property of material concrete and durability of concrete structure]

Department of Human & Social Systems

http://wdnsword.iis.u-tokyo.ac.jp/index_e.shtml

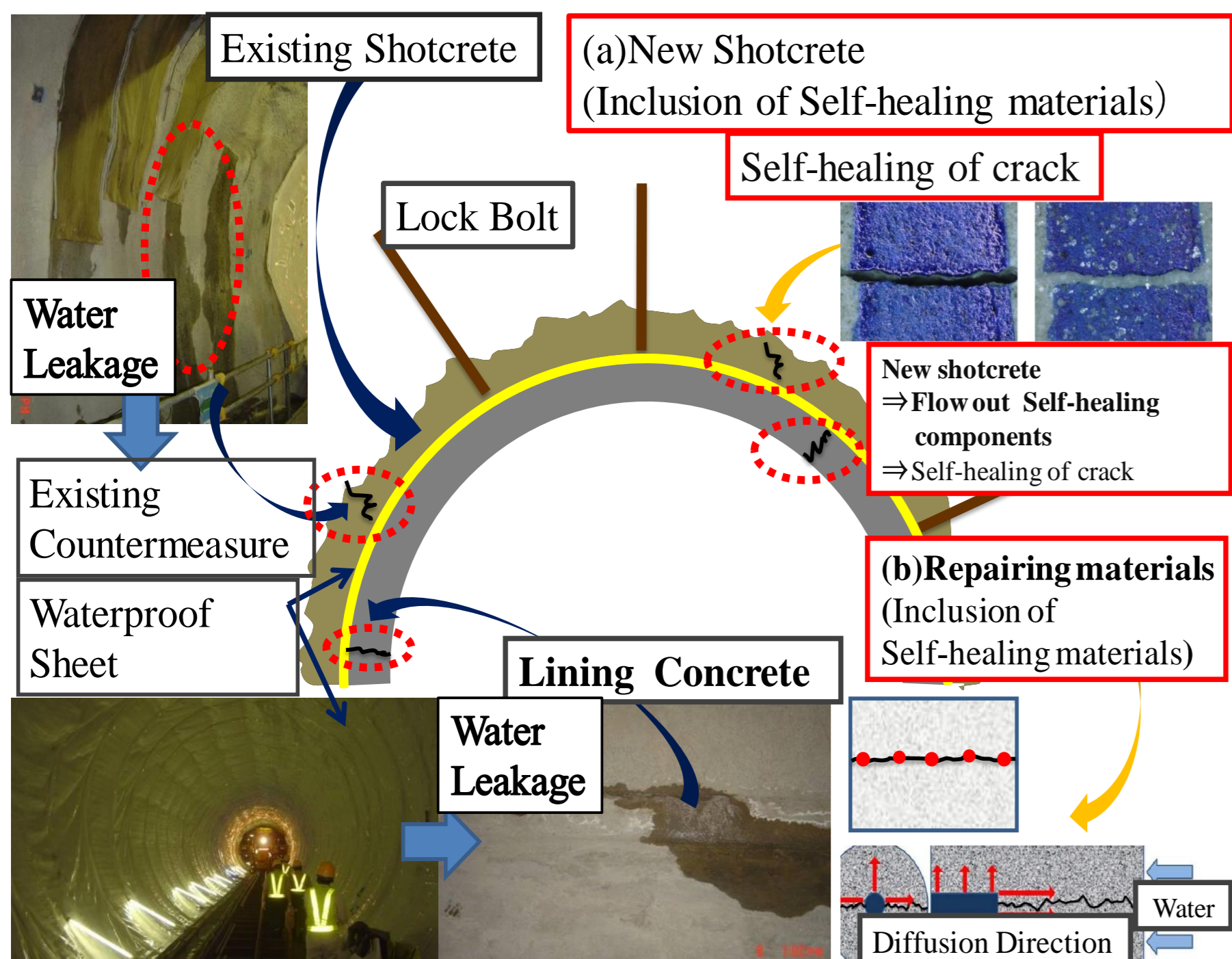
Concrete & Recycling Engineering

Dept. of Civil Eng.

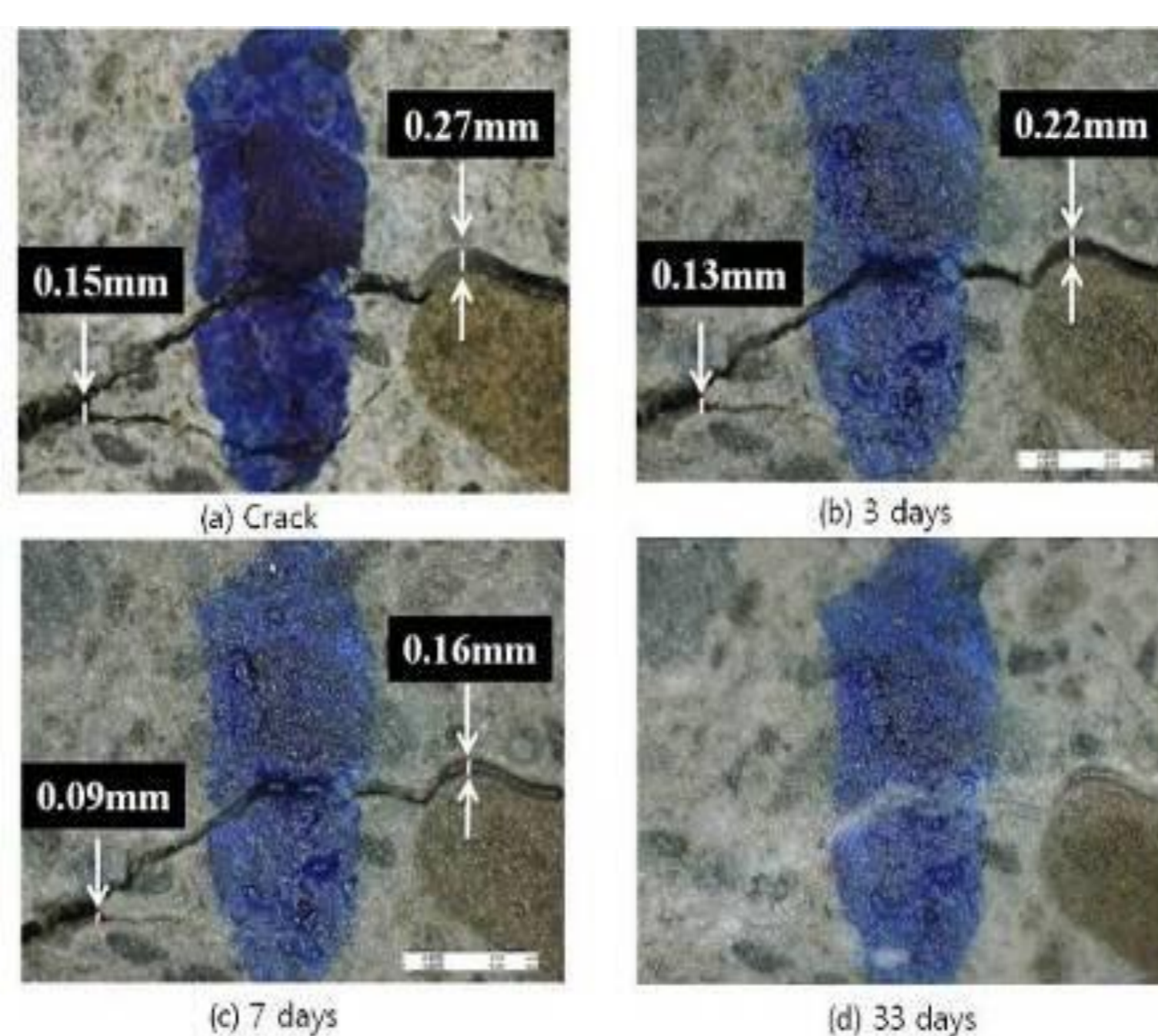
Property and durability of concrete

Kishi laboratory undertake research on (1) cement-based material resolving its physical property, performance assessment, development and practical application of new material and (2) quality inspection / maintenance of concrete structure.

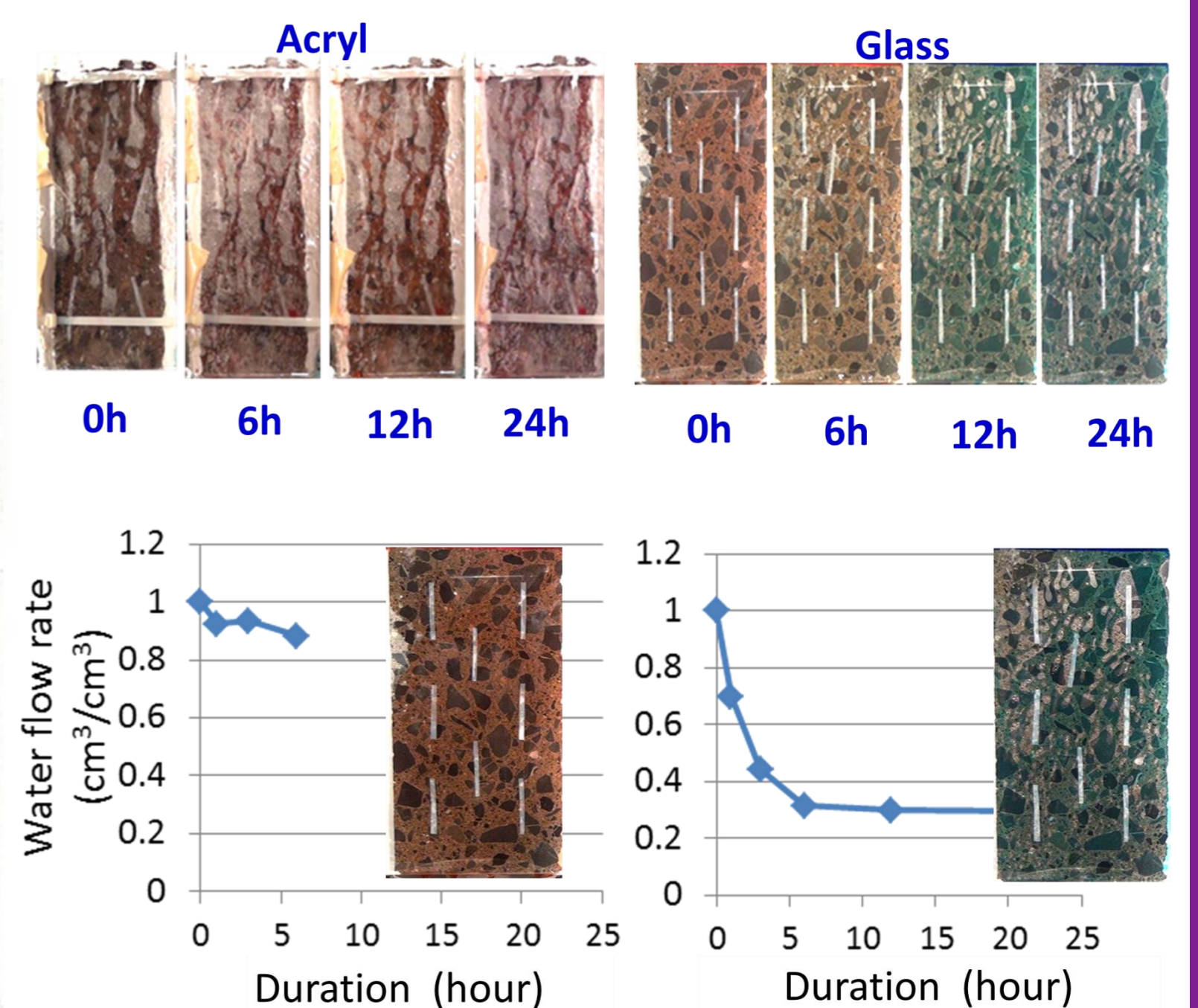
- ◆ A study on new evaluation method of salt penetration that can be considered stagnation and continuation of advection and diffusion
- ◆ A study on new durability design frame that is based on evaluation of liquid water penetration as alternative to neutralization
- ◆ A study on the relationship between micro pore structure and mass transfer in cementitious material using micro/ nano technology
- ◆ A study on mechanism of water flow reduction due to air bubble generation in crack
- ◆ Development of simplified evaluation method of concrete surface quality
- ◆ Development of self-healing technology of concrete crack



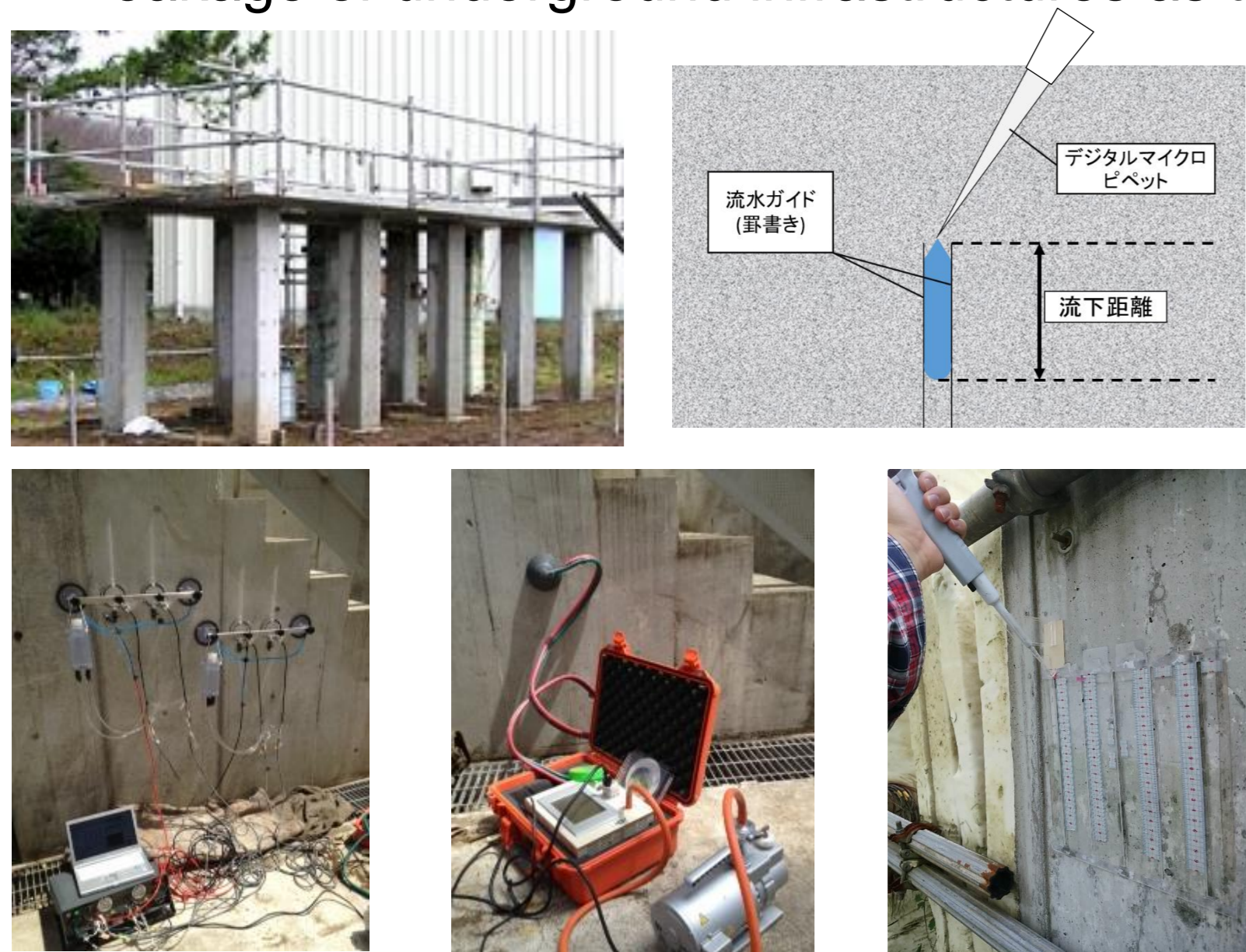
Application of self-healing concrete for water leakage of underground infrastructures as tunnels



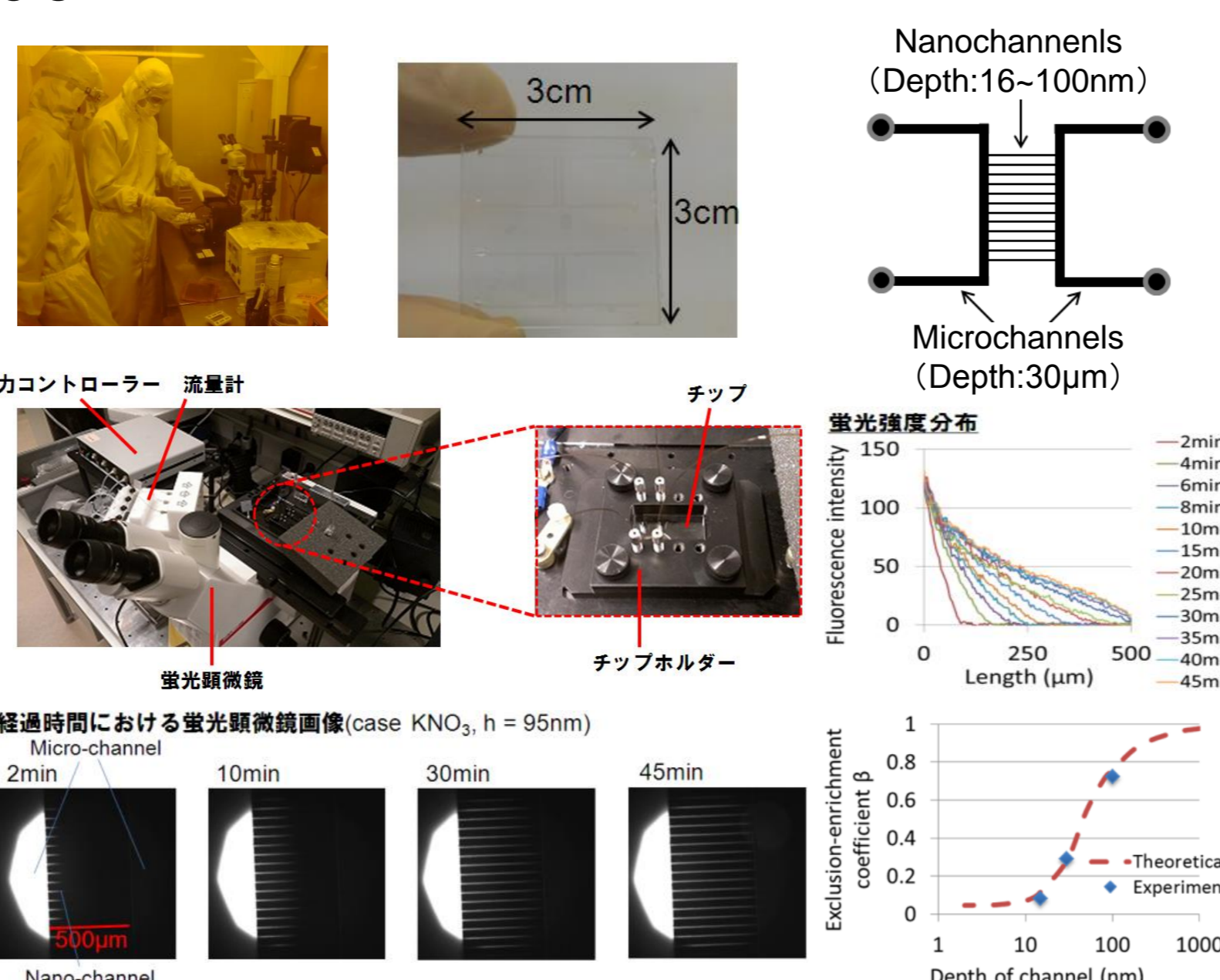
Self-healing process of self-healing concrete



Water flow reduction due to generation of air bubble

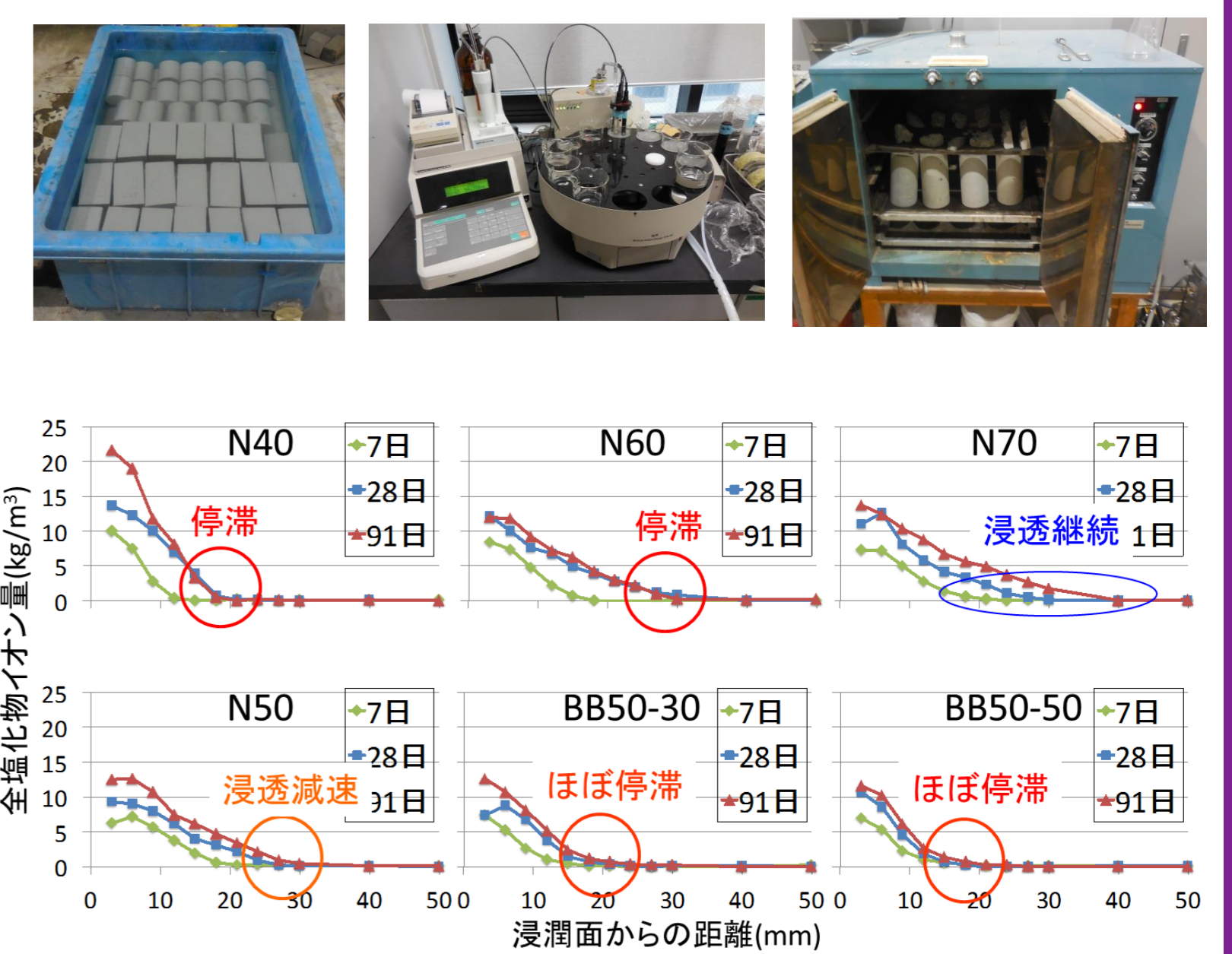


Surface Water Absorption test (SWAT) / Surface air permeability test (Torrent method) / Repeated water flow test / Evaluation of concrete surface quality



Mass transport in micro/nano channel

Under the guidance of Hibara lab. In 4th division (now in Tokyo Institute of Technology) and Prof. Eijkel in Twehte university



Phenomenon of salt penetration stagnation