

KISHI LAB.

[Physical properties of concrete and durability of concrete structure]



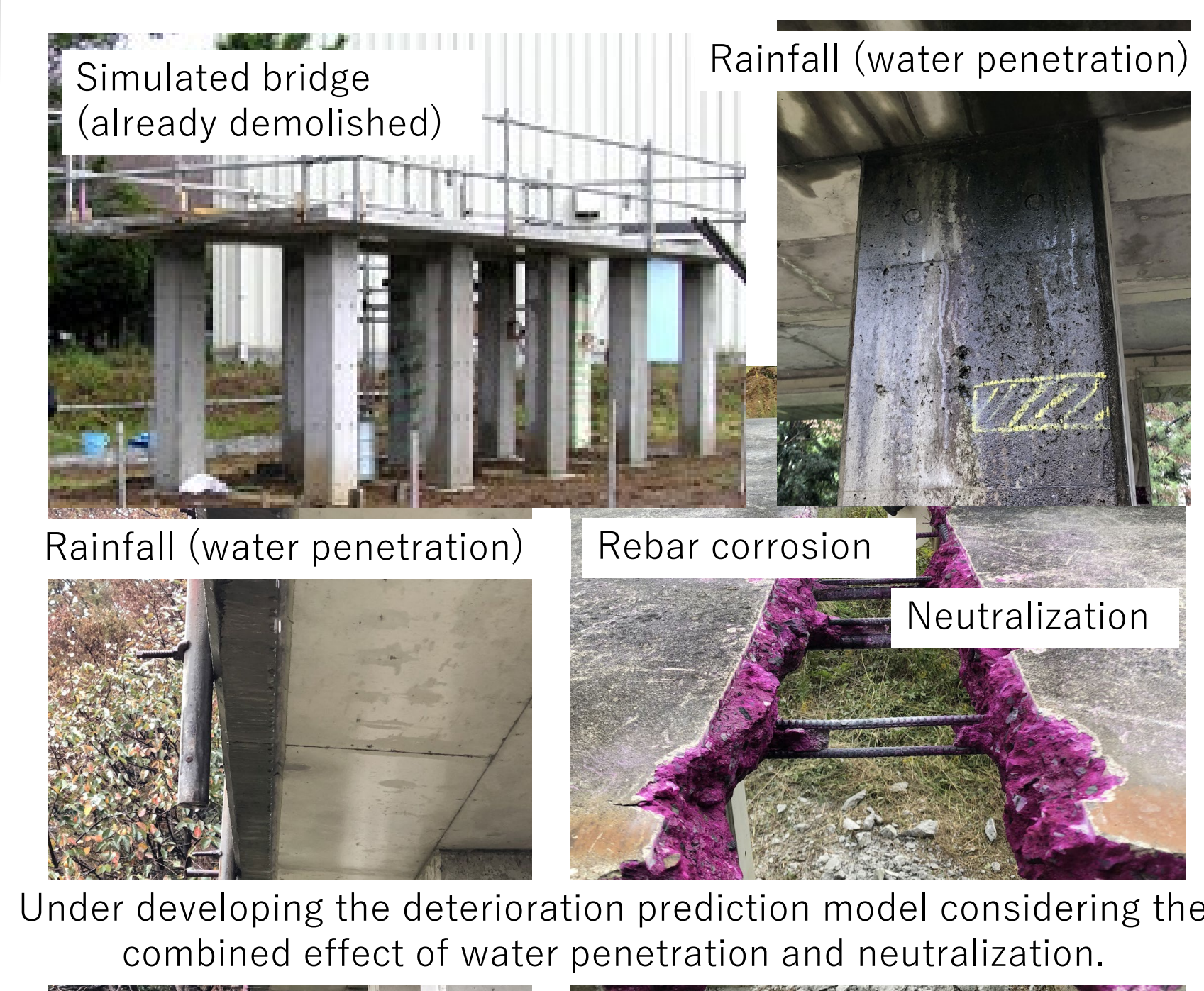
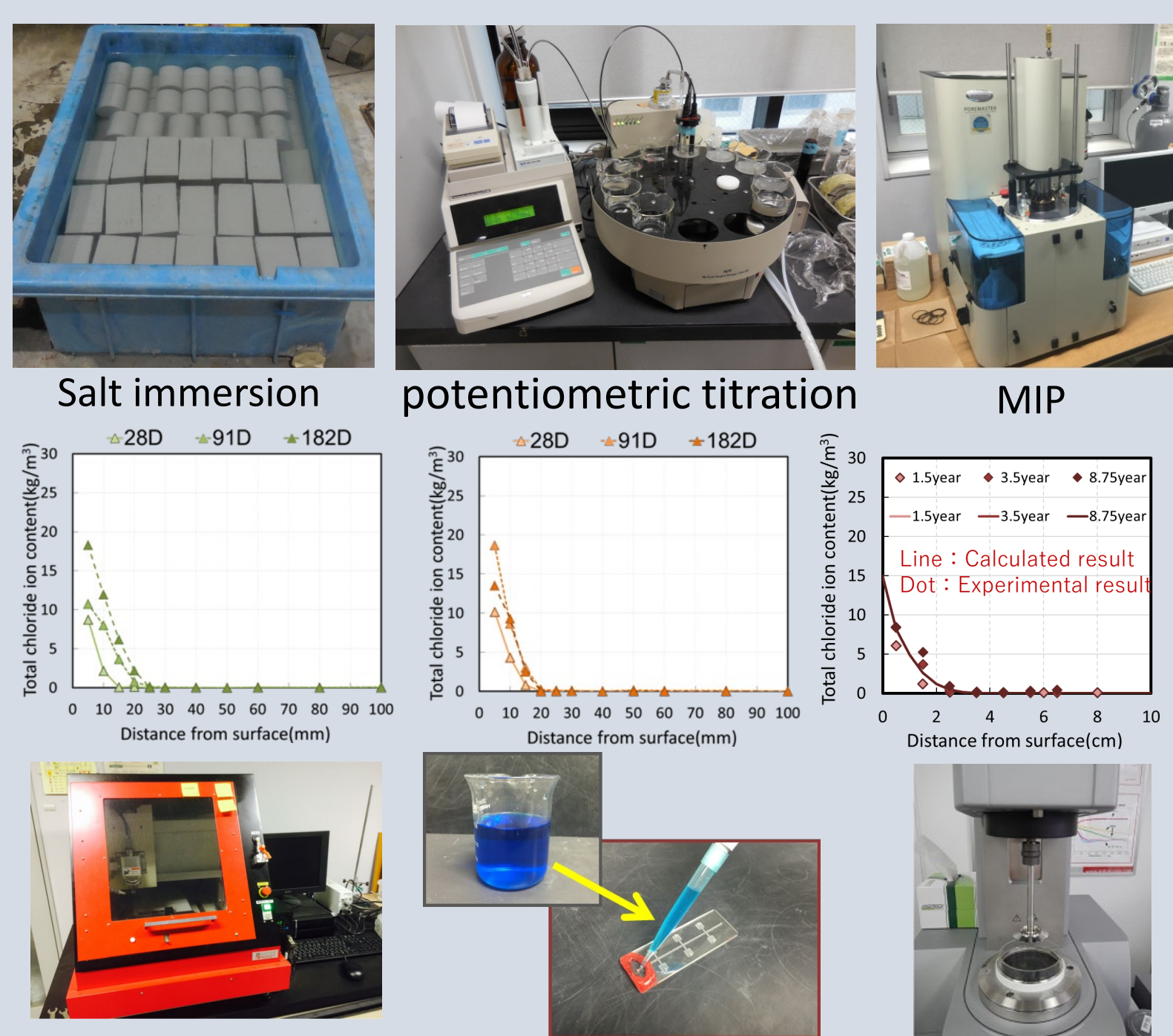
Department of Human & Social Systems

Concrete & Recycling Engineering

<http://wdnsword.iis.u-tokyo.ac.jp>

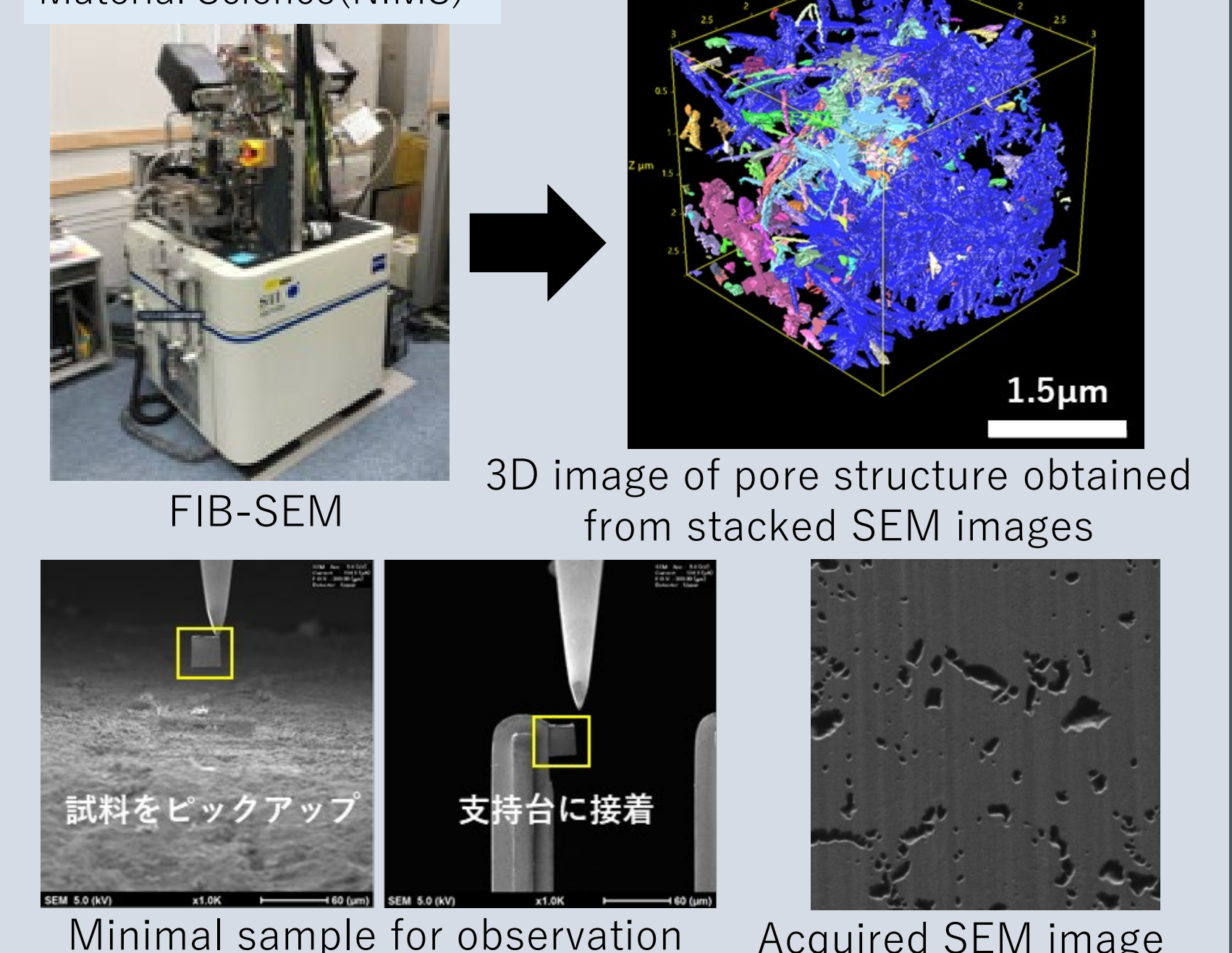
We research on (1) physical property, performance assessment, deterioration mechanism of cementitious materials, (2) development and practical application of new material and (3) quality inspection / maintenance of concrete structure.

- Stagnation mechanism of chloride ingress and its reasonable prediction model
- New maintenance design frame based on combination evaluation of liquid water penetration and neutralization (carbonation)
- Regularity of flow based on velocity profiles in coaxial cylinders
- Mechanism of water flow reduction due to the existence of air-water interface in crack
- Evaluation on the property of mass transfer based on 3D information of pore structure
- Development of self-healing technology of concrete crack

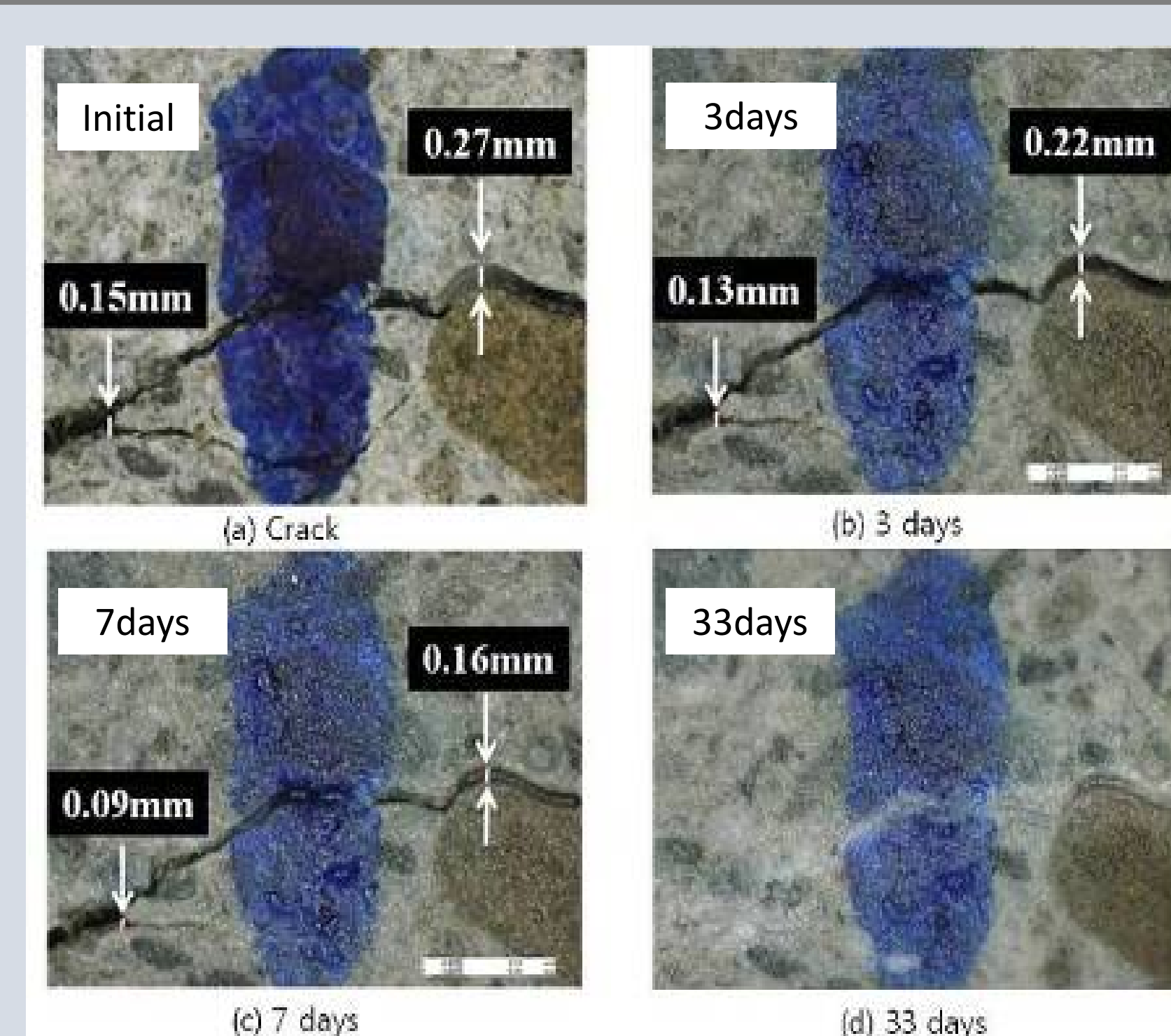
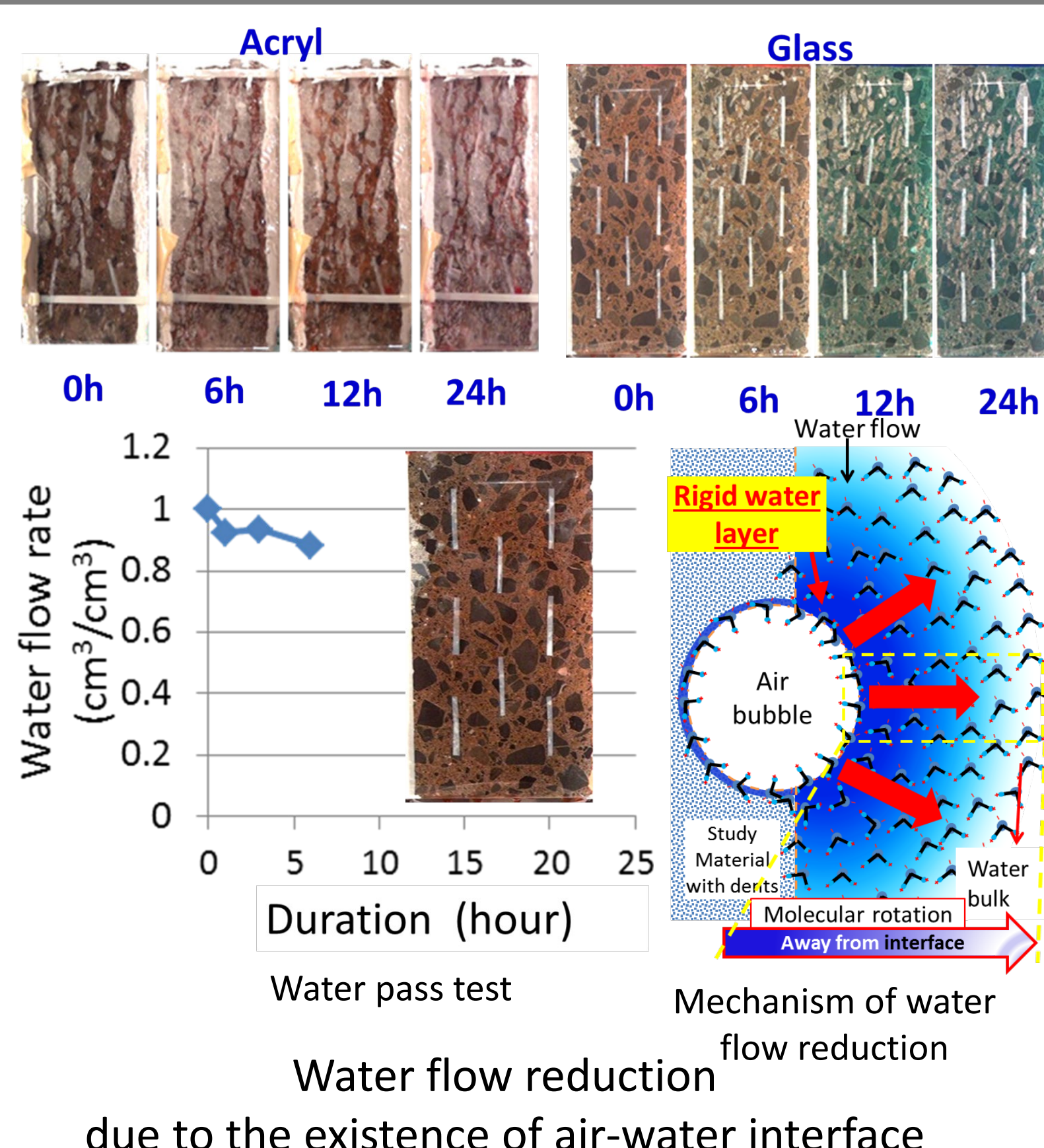


A new maintenance frame combining water penetration and neutralization

National Institute for Material Science (NIMS)



Evaluation on the property of mass transfer based on 3D information of pore structure



Self-healing process of self-healing concrete

