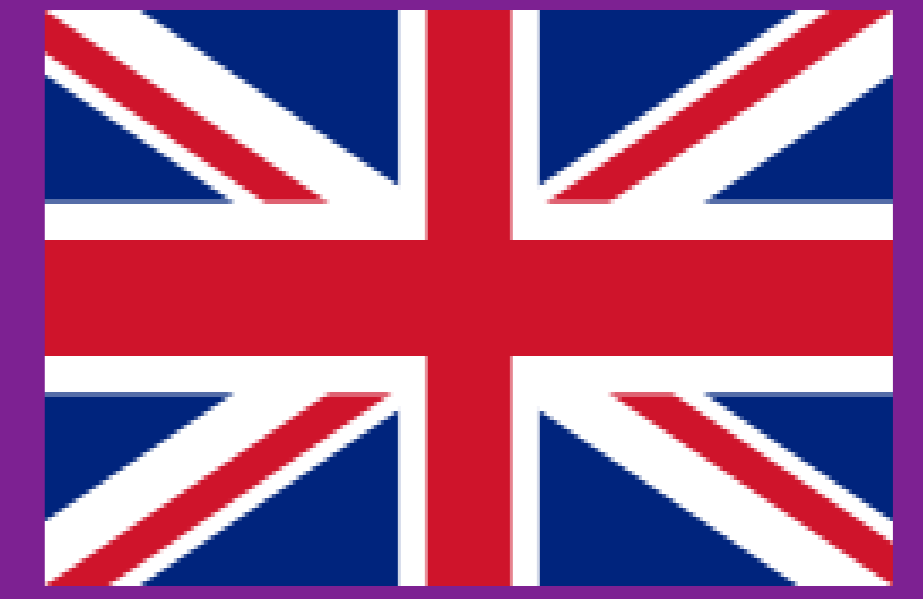


Thornton Lab

[Underwater photonics]



Centre for Integrated Underwater Observation Technology

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

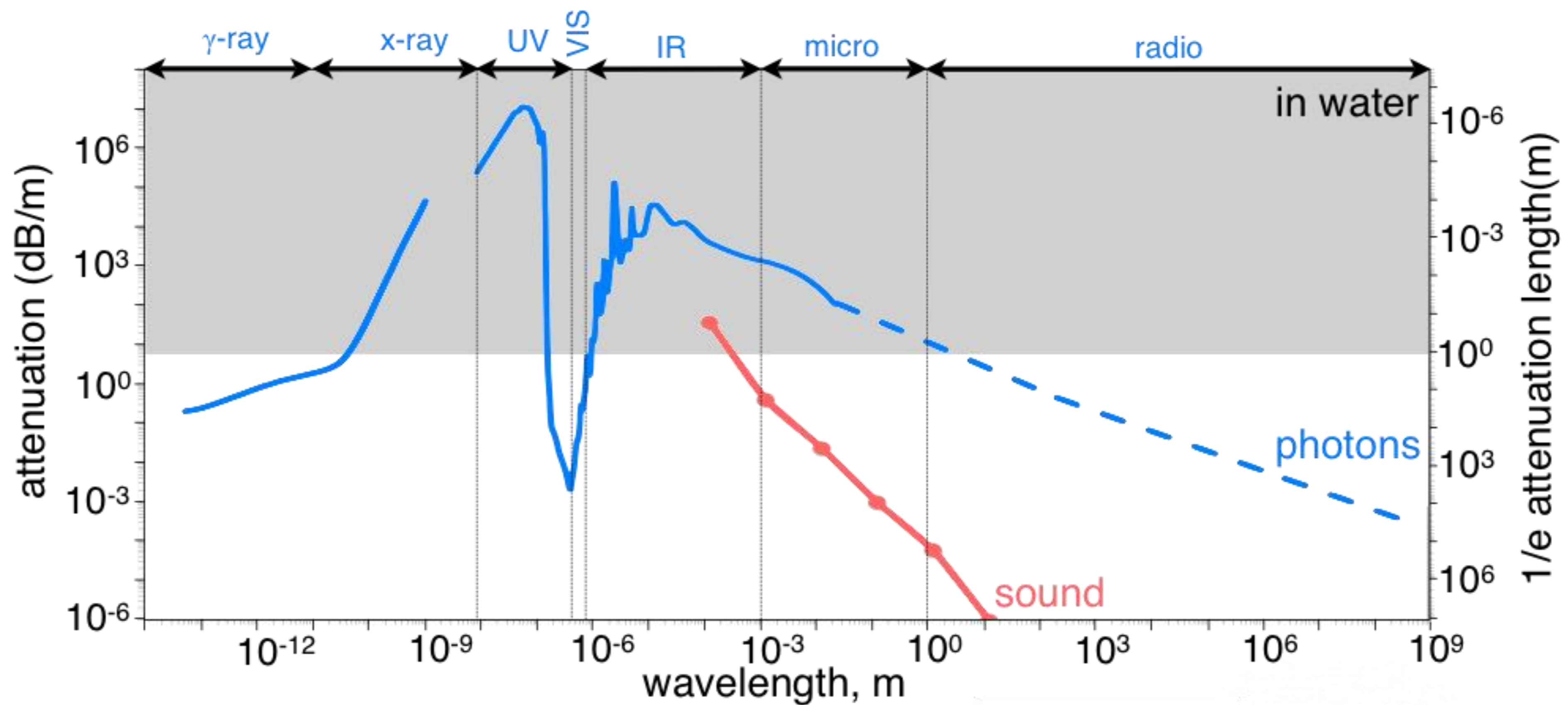
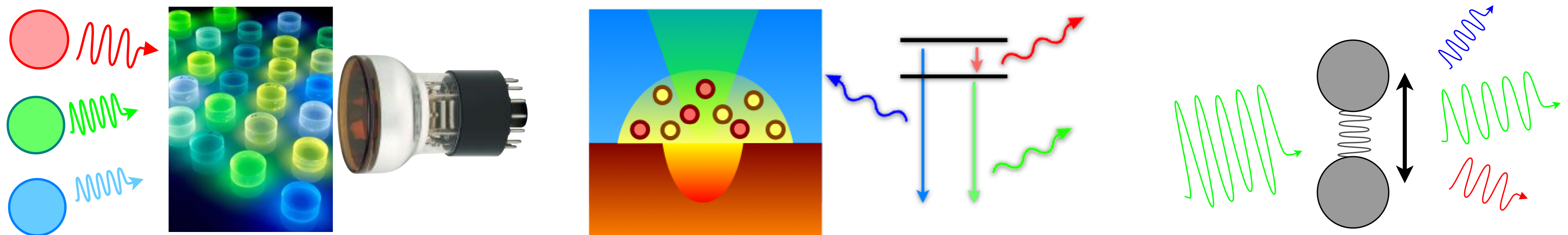
Shedding light on ocean matters

Underwater sensing is the raw material of how we perceive the ocean. We aim to improve our observational capabilities by investigating the interactions of photons with matter in harsh underwater environments.

Scintillation: Monitoring of seafloor radiation using in situ gamma-ray spectroscopy

Atomic emission: Laser-induced plasma for in situ element analysis

Raman scattering: Laser Raman for in situ analysis of molecules



Interference: Laser holography for high volume microscopic imaging

Machine vision: Structured light for wide area 3D visual seafloor reconstruction

Machine learning: Probabilistic modeling for automated information extraction

