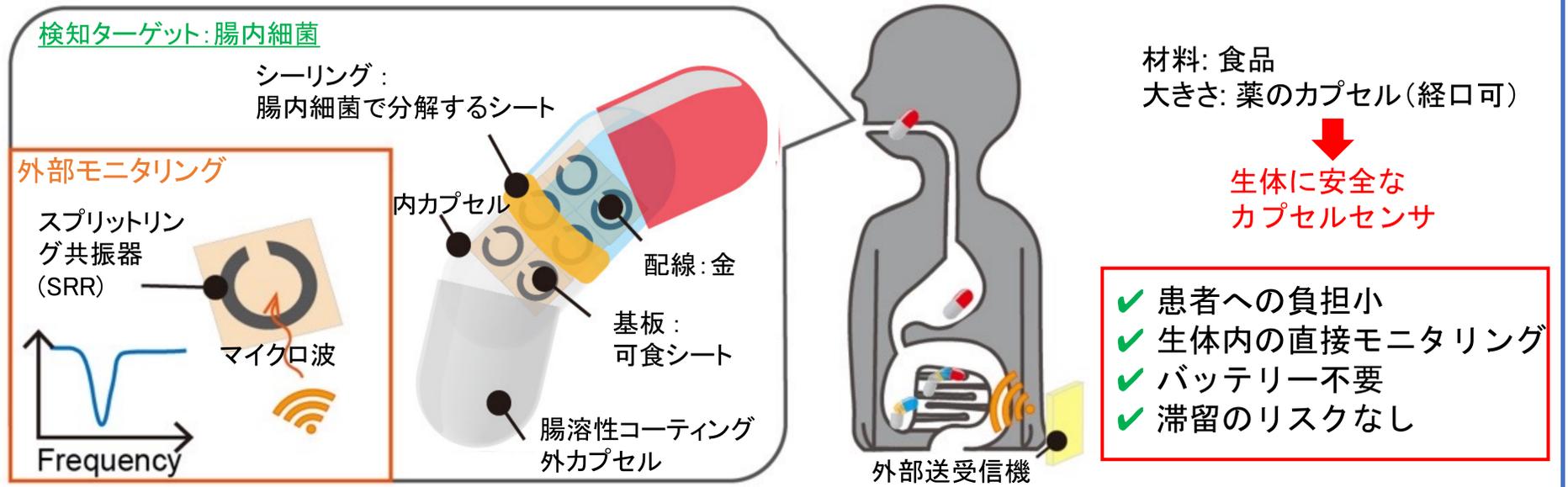


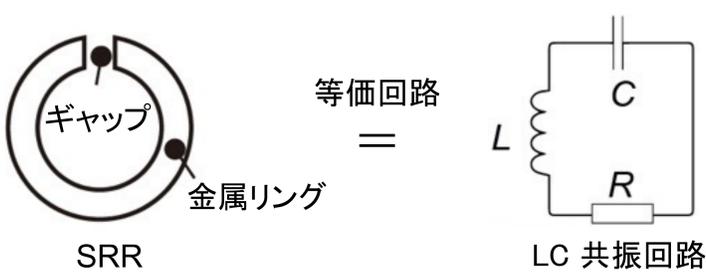
食品材料のみで構成された経口摂取可能なワイレスカプセルセンサ

慶應義塾大学 理工学部 尾上弘晃, 稲見文香
電気通信大学 情報理工学研究科 菅哲朗

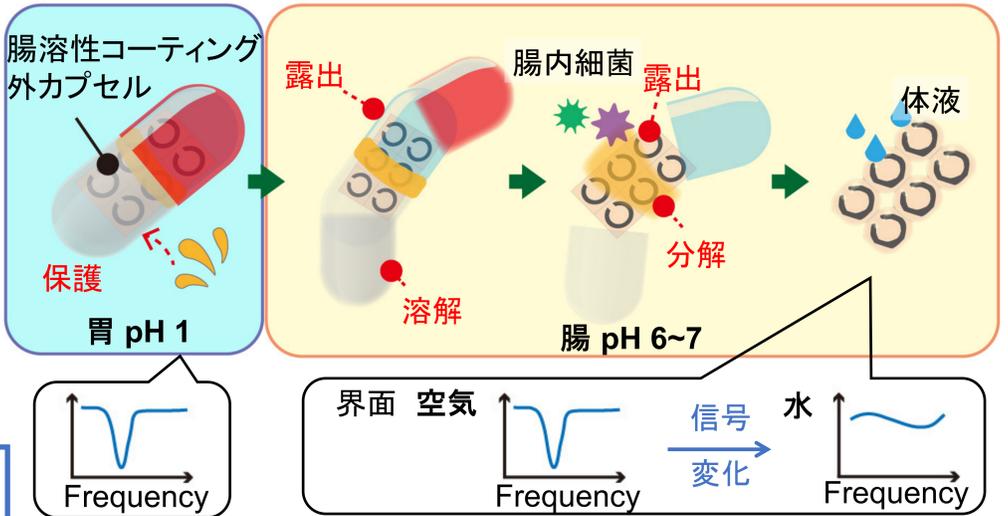


原理

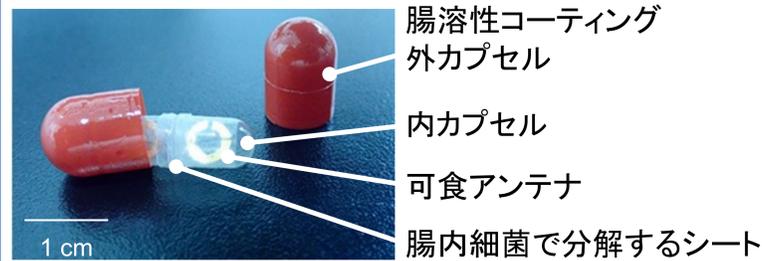
ワイレス通信の原理



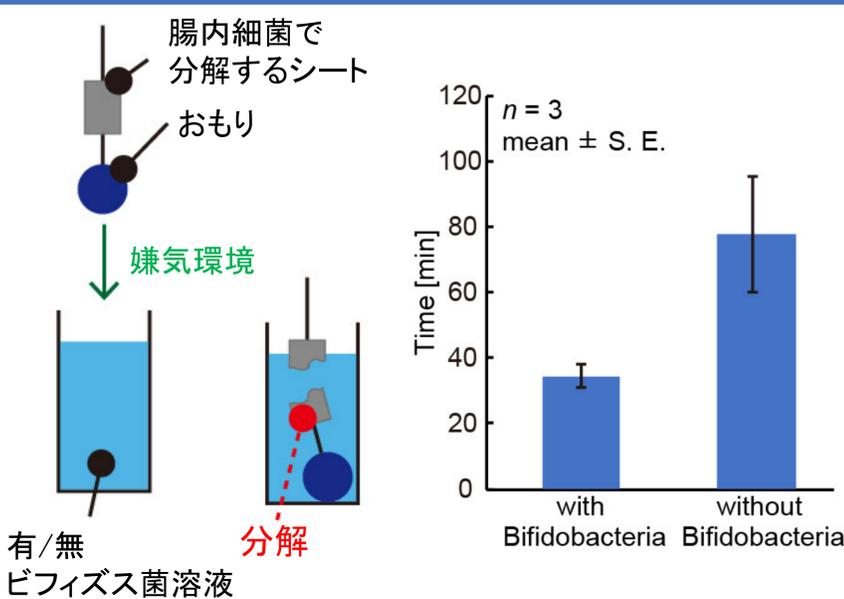
検知原理



作製デバイス

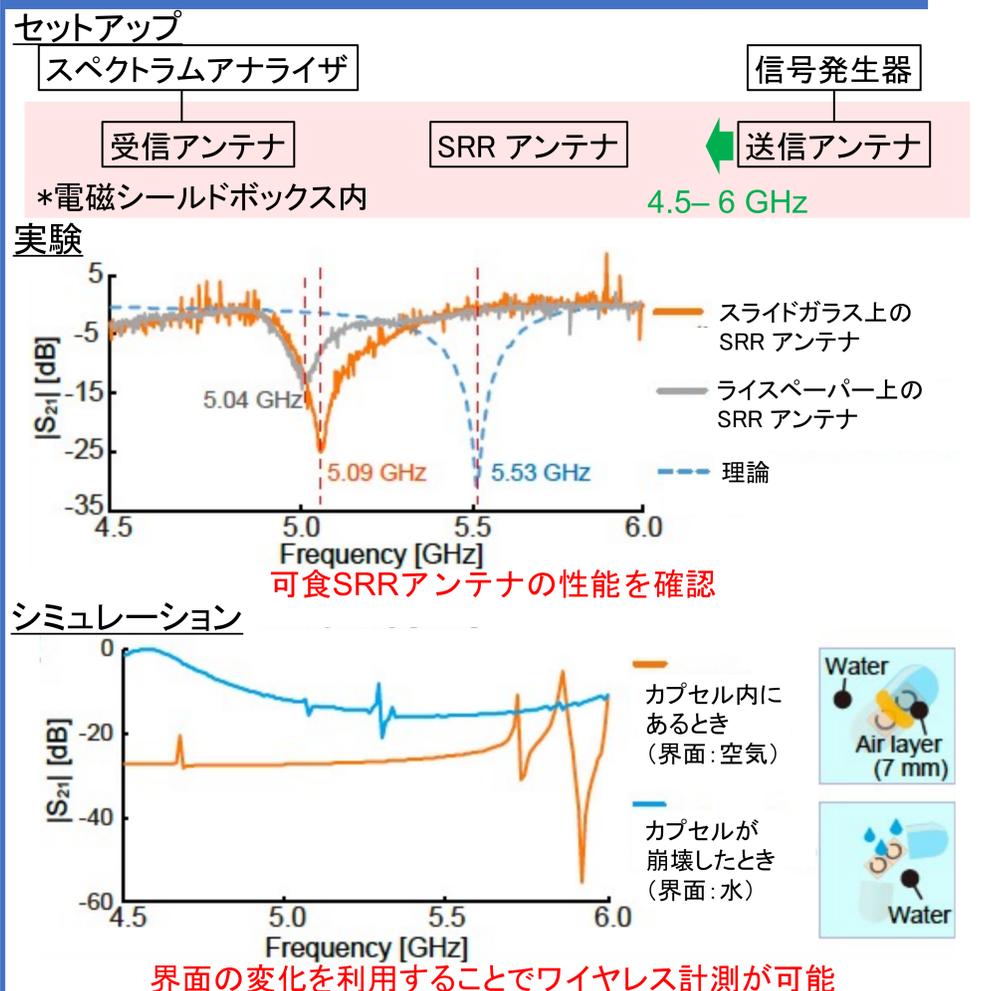


腸内細菌で分解するシートのビフィズス菌による分解実験



腸内細菌で分解するシートはビフィズス菌の検出に有効な物質であることを確認

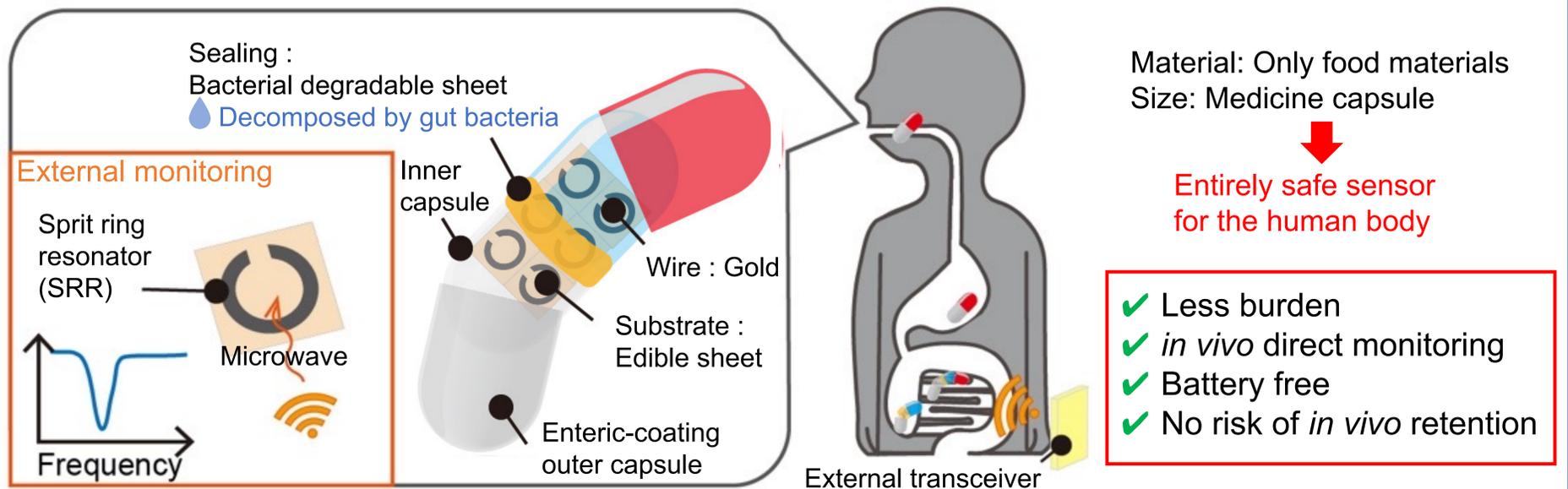
SRRアンテナによるワイレス通信



Ingestible wireless capsule sensor made from edible materials

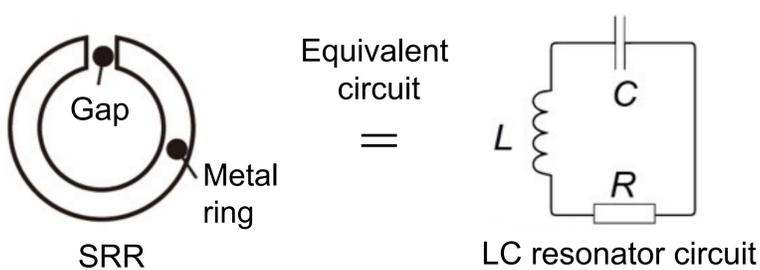
Hiroaki Onoe, Ayaka Inami: Department of Mechanical Engineering, Keio University

Tetsuo Kan: Department of Mechanical Engineering and Intelligent Systems, The University of Electro-Communications

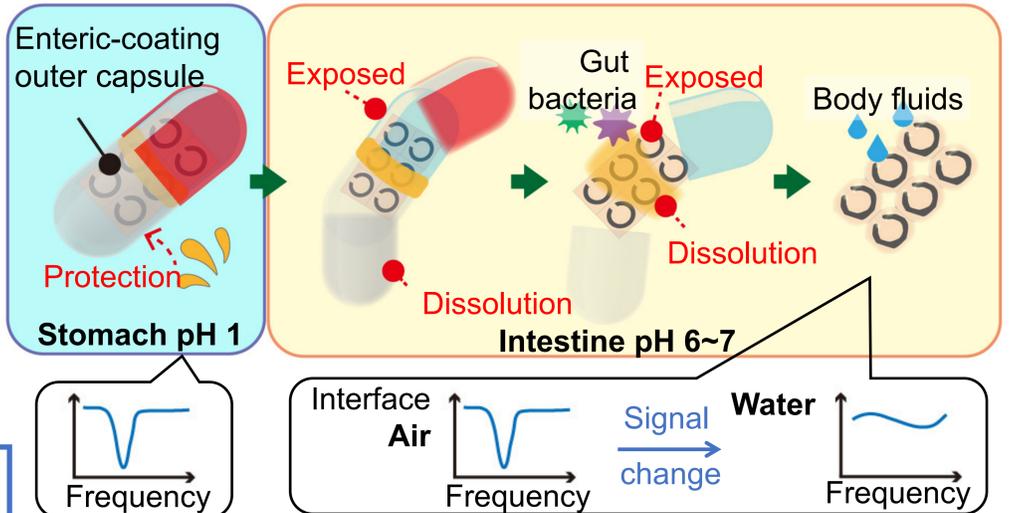


Principle

Principle of wireless communication



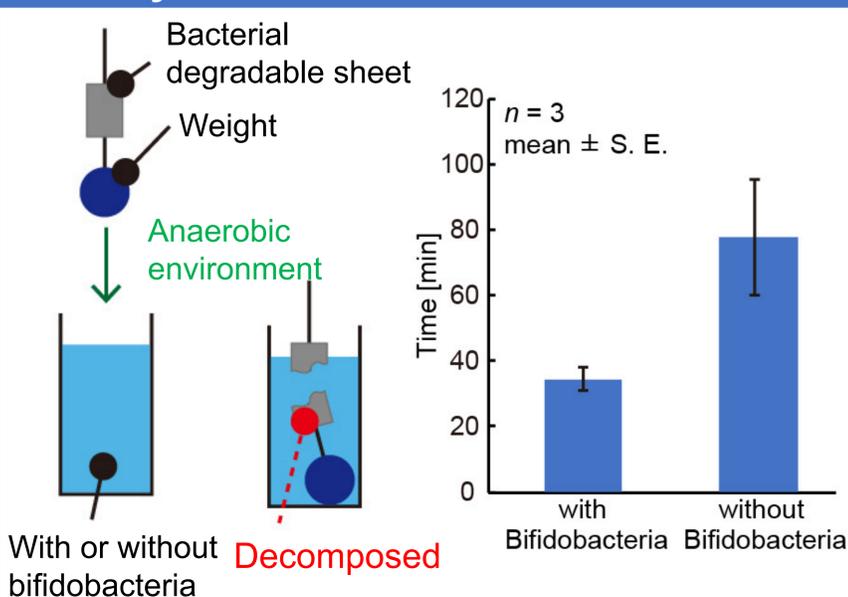
Working principle



Fabricated device



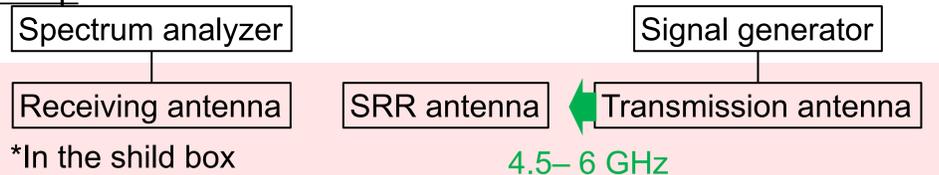
Decomposition of bacterial degradable sheet by bifidobacteria



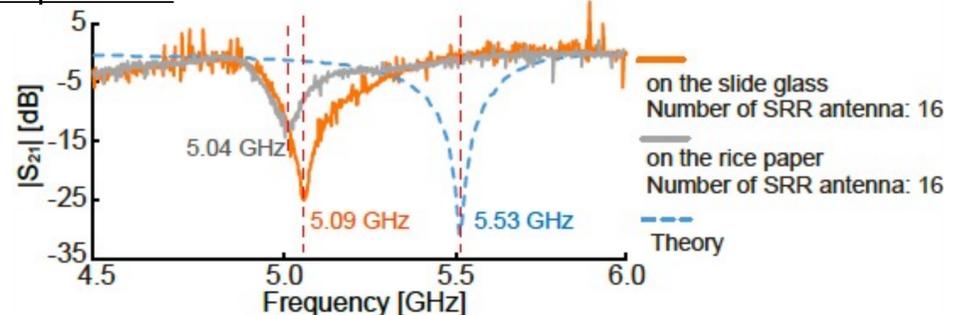
The bacterial degradable sheet confirmed to be an effective substance for detection of bifidobacteria

Wireless measurement with SRR antenna

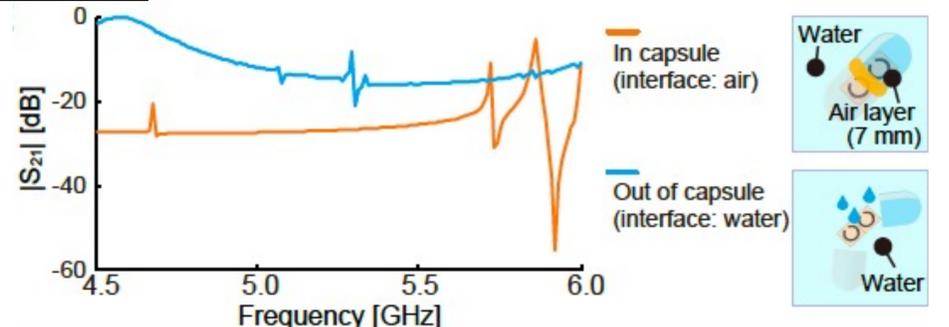
Setup



Experiment



Simulation



Wireless measurement is possible due to the change in the interface