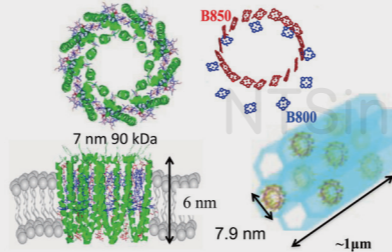
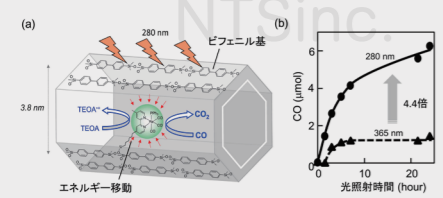
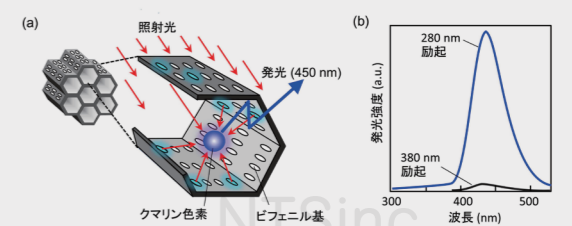
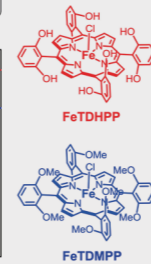
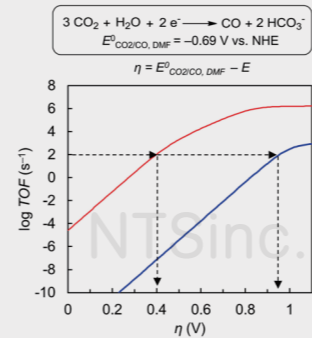
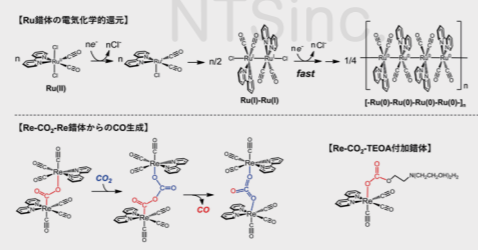
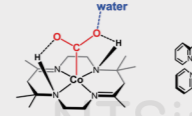
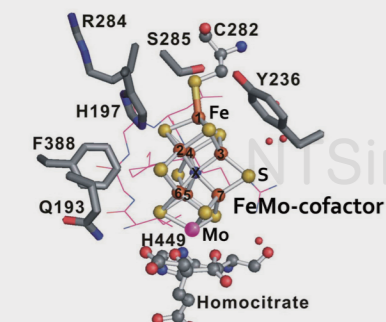
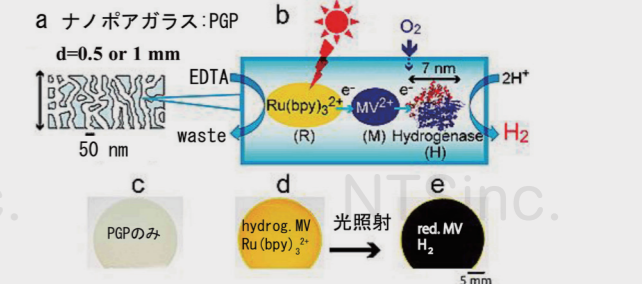
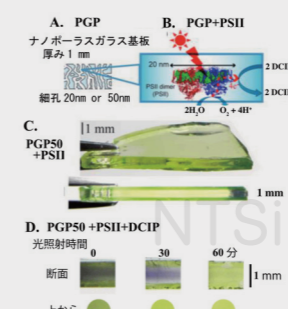
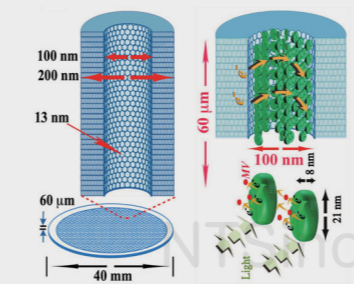
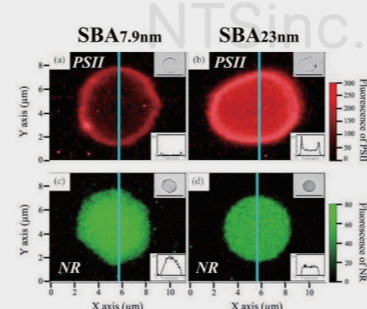
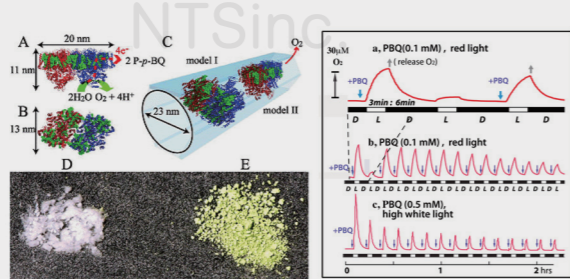
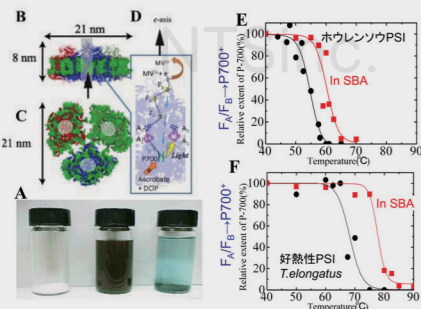
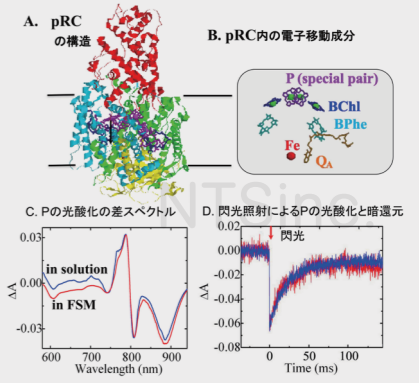
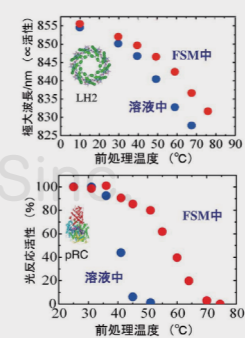
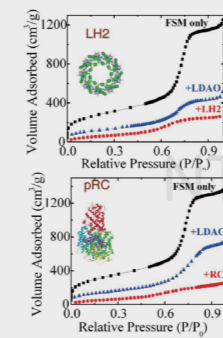
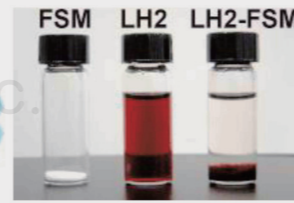


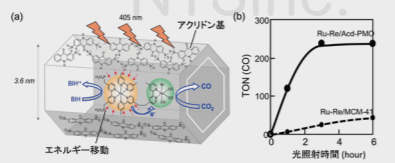
A. LH2の構造 (左) と LH2 内のバクテリオクロロフィル配置 (右), 多孔体内吸着の模式図 (右下)



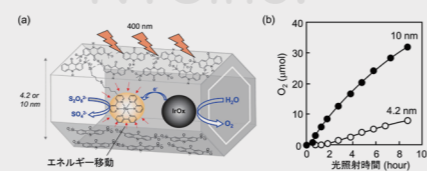
B. FSM粉末を LH2溶液に加えて複合体を作成する



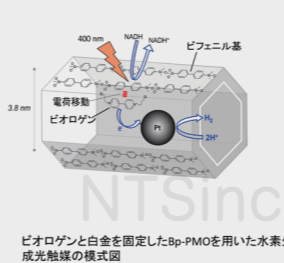
(a) Re 錯体を固定した Bp-PMO の模式図と反応メカニズム、(b) CO<sub>2</sub> 光還元反応 (CH<sub>3</sub>CN:TEDA = 5:1 v/v, 50 ml)、励起波長: 280 nm (●), 365 nm (▲)



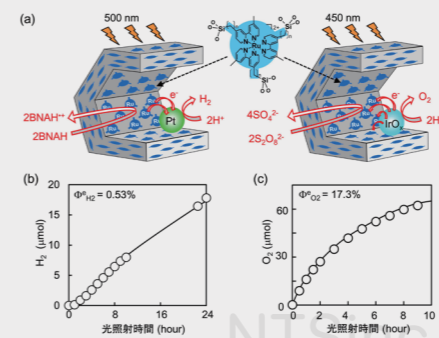
(a) Ru-Re 錯体を固定した Acid-PMO の模式図と反応メカニズム、(b) CO<sub>2</sub> 還元反応 (励起波長 = 405 nm, BIH(0.1M) in DMF-TEDA (5:1 v/v))



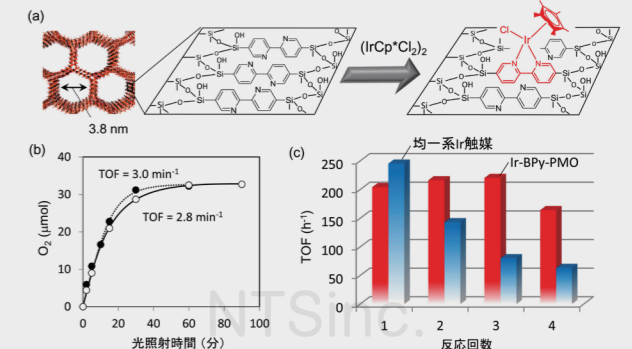
(a) Ru 錯体と IrO<sub>2</sub> を固定した アクリドン-PMO の模式図と反応メカニズム、(b) 水の酸化反応 (励起波長: 400 nm, Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub> (31 mM) in water)、Acid-PMO の細孔直径 = 4.2 nm (○), 10 nm (●)



ピロゲンと白金を固定した Bp-PMO を用いた水素生成光触媒の模式図



(a) Ru-PMO を光増感剤とした水素 (左) および酸素 (右) 生成光触媒の模式図と、(b) 水素および (c) 酸素生成量の経時変化



(a) BPy-PMO に固定した Ir 錯体の模式図、(b) Ir-BPy-PMO (Ir/BPy = 0.03) (○) と均一系 Ir 触媒 (●) による Ce<sup>4+</sup> (3mM) を酸化剤とした水の酸化反応、(c) 触媒の繰り返し使用実験 (Ce<sup>4+</sup>: 15 mM)