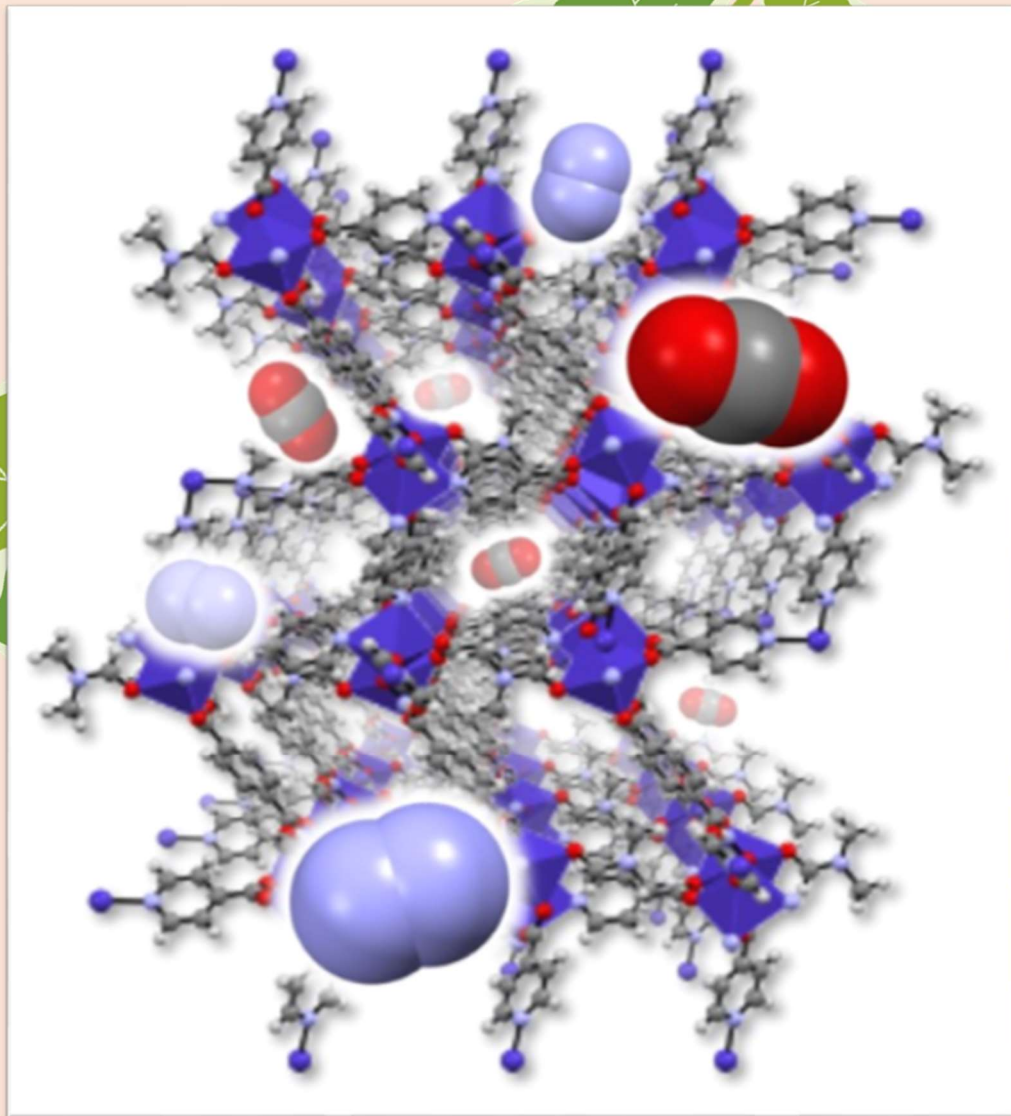
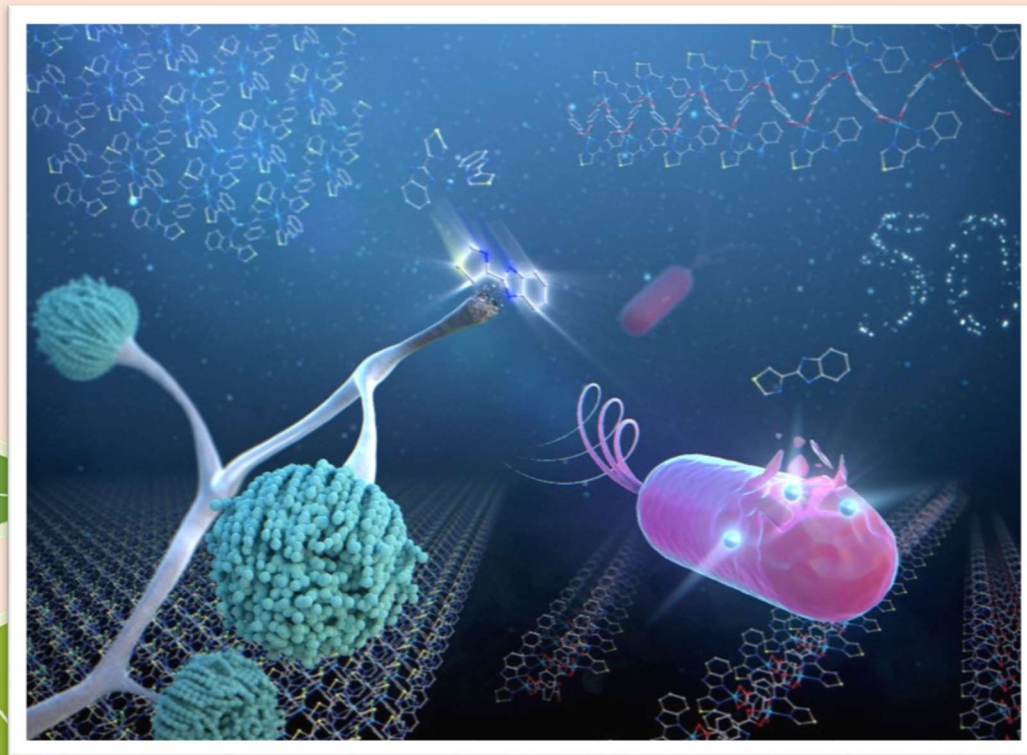


立教化学画廊 Rikkyo Chem-Arts Gallery

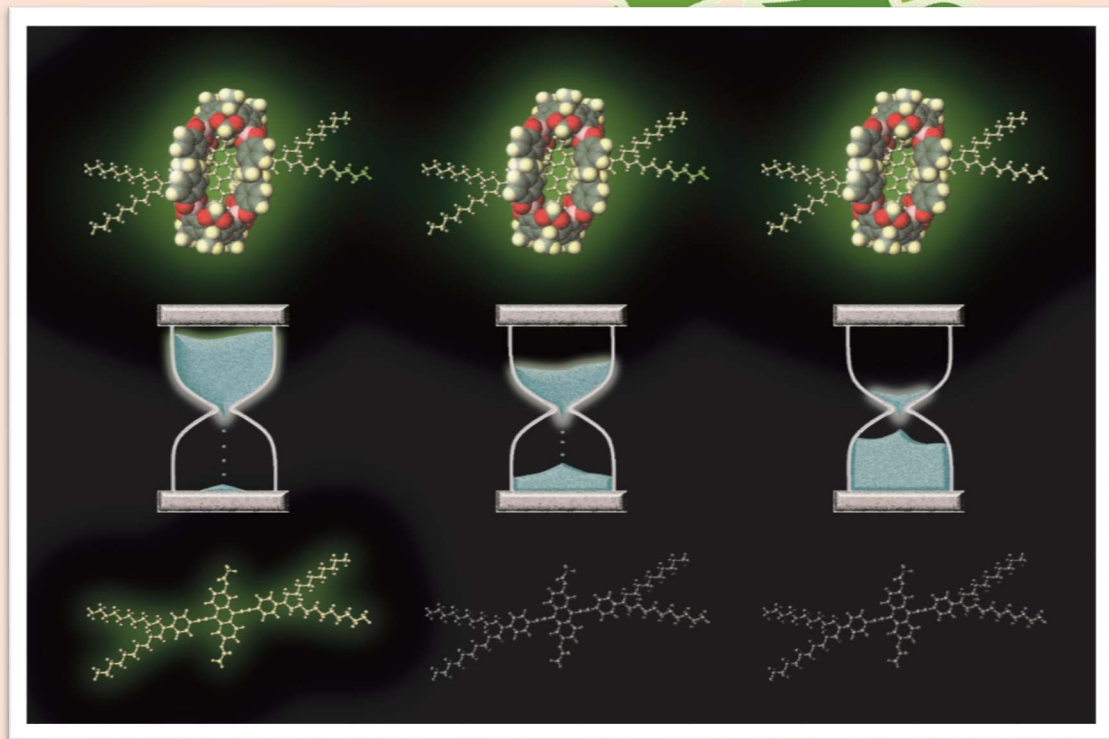
化学雑誌の表紙やプレスリリースにて掲載された作品です。



Koh Sugamata and Mao Minoura



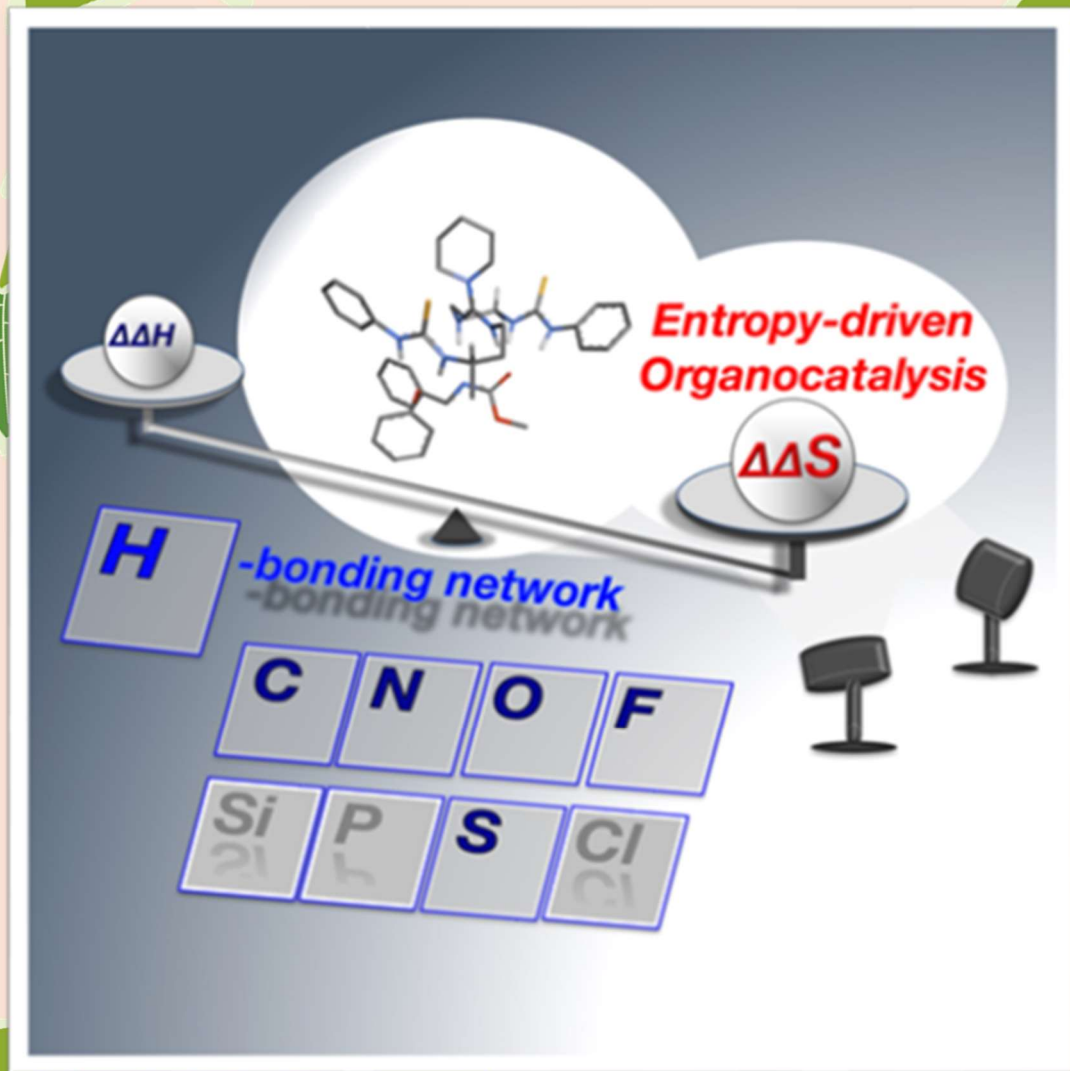
Mao Minoura



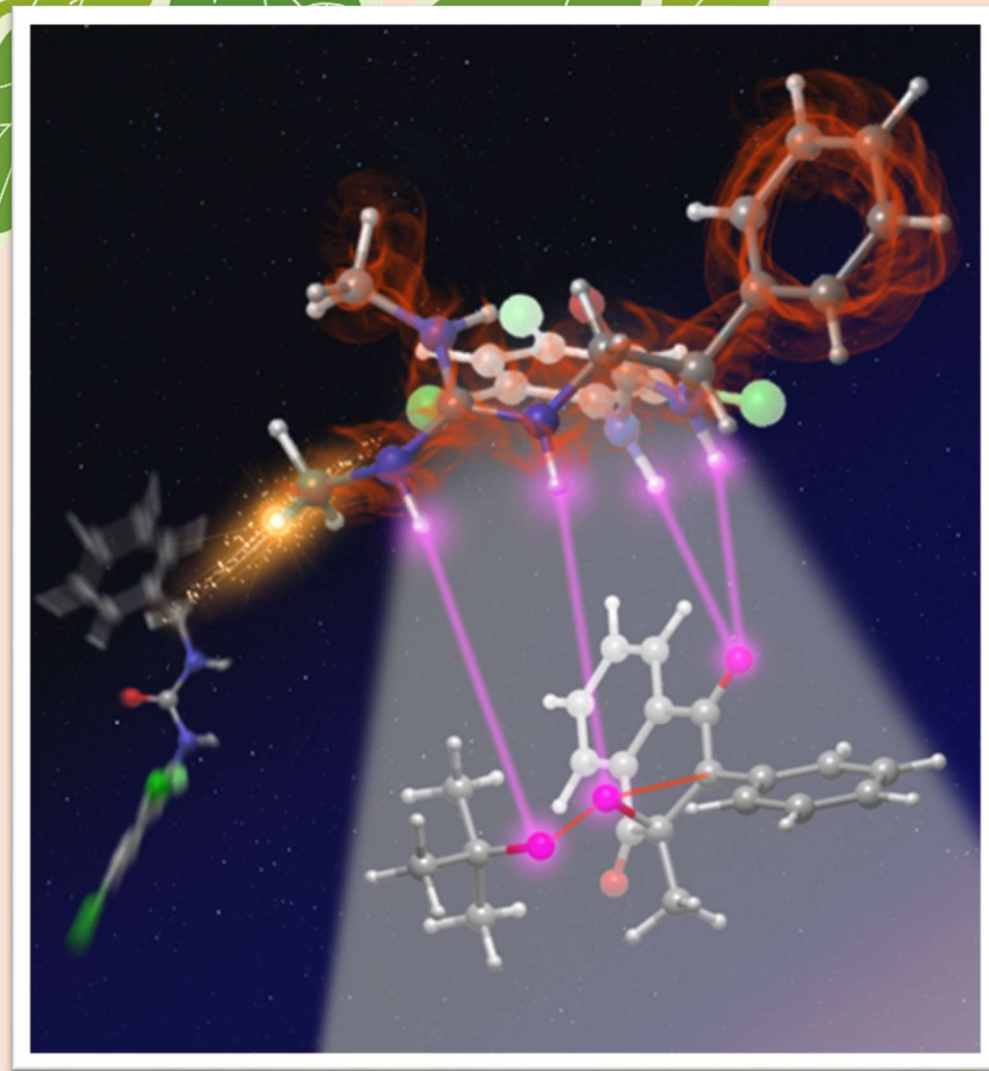
Masaaki Mitsui



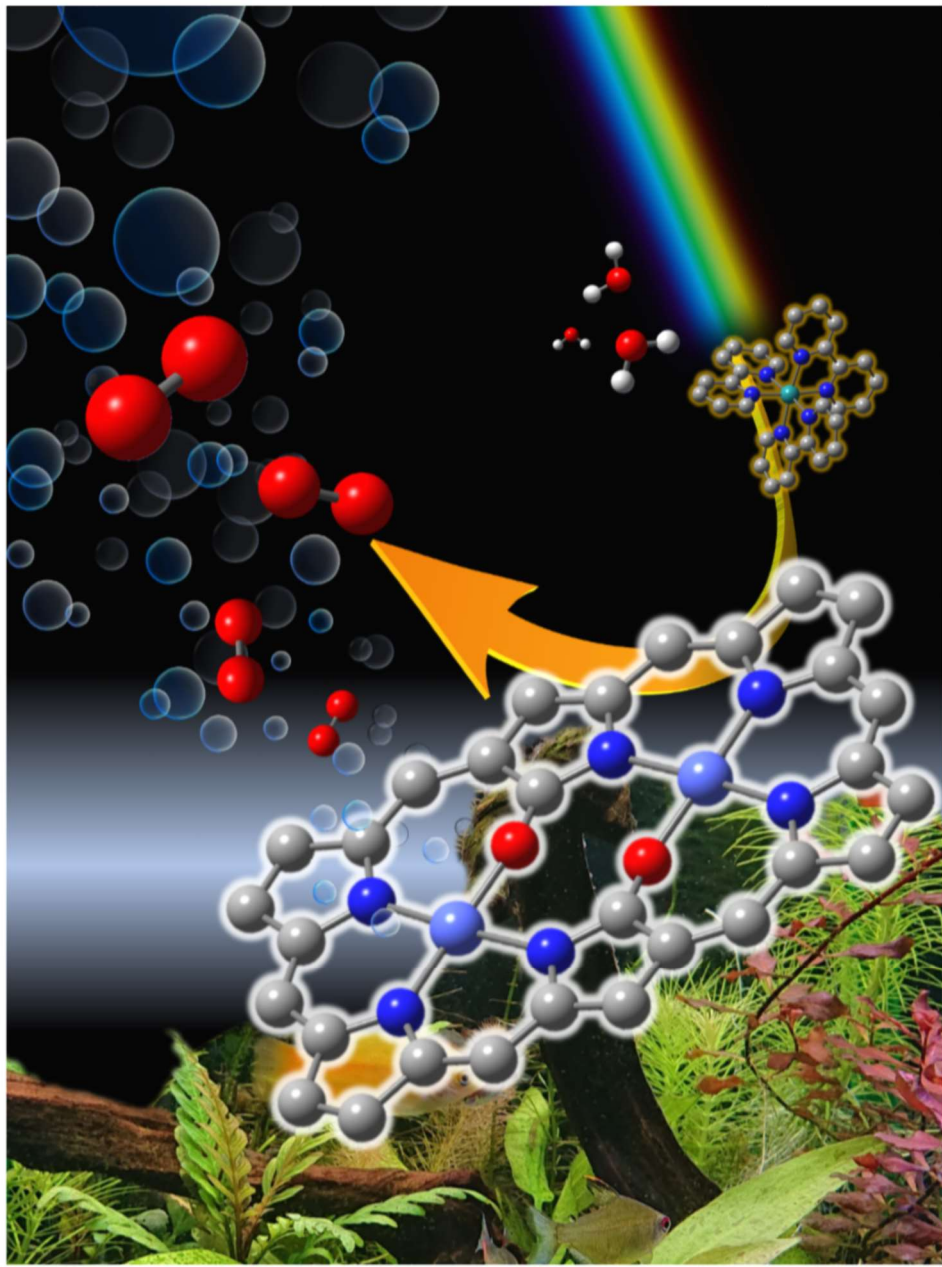
Yoshiki Nihori, Yuki Wada, and Masaaki Mitsui



Masahiro Yamanaka

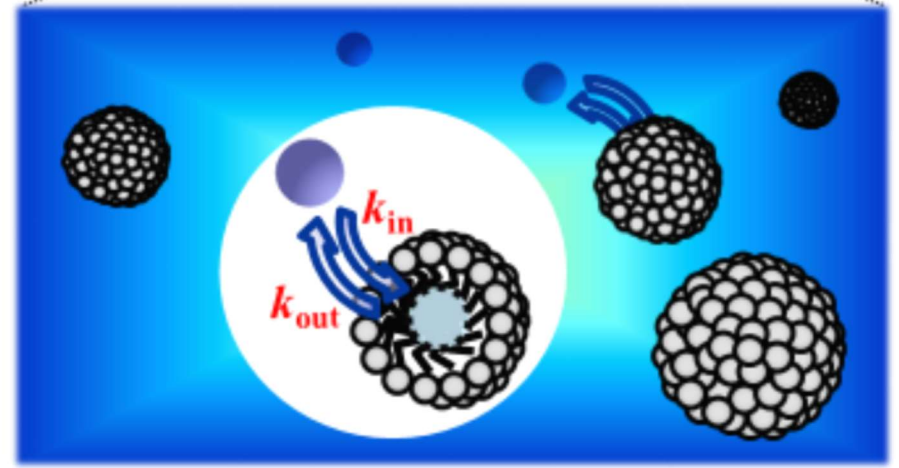
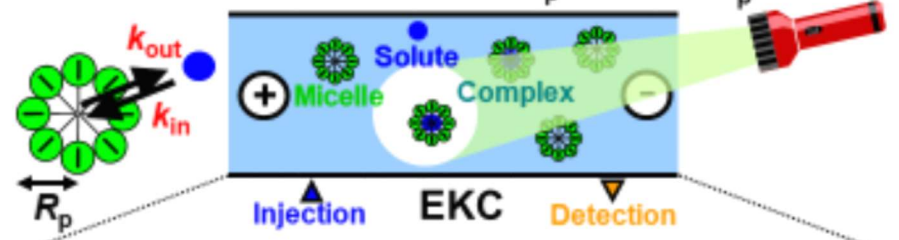


Masahiro Yamanaka

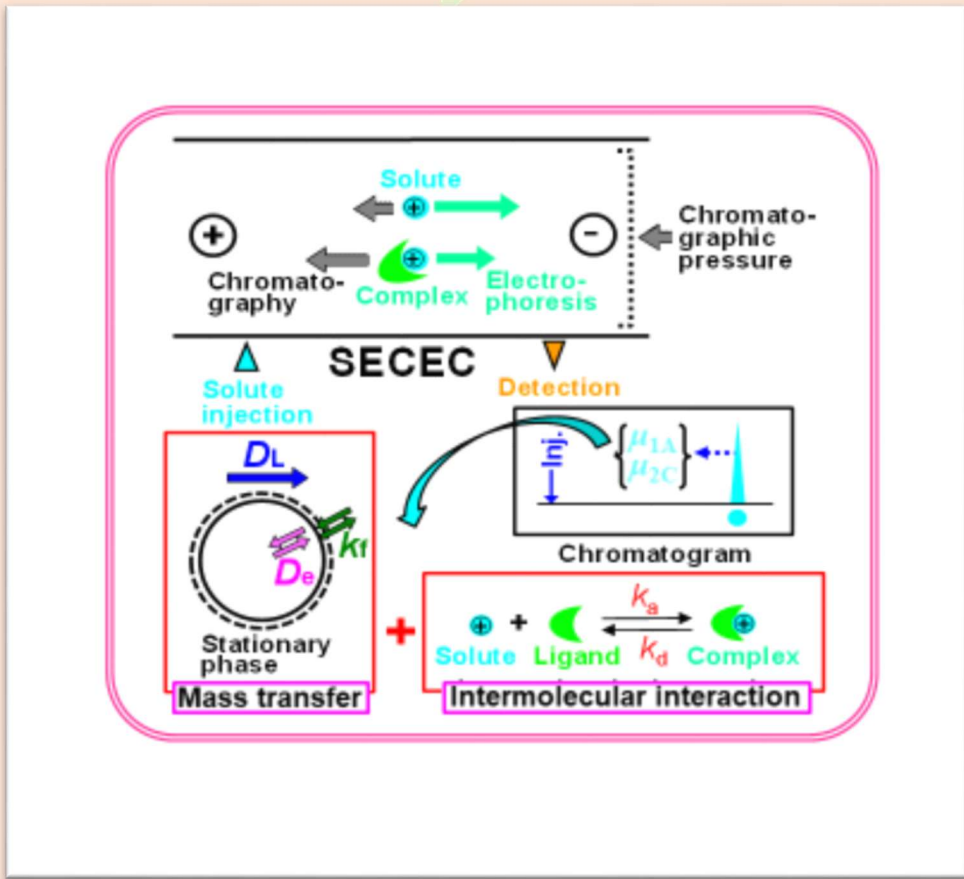


Takashi Nakazono and Tohru Wada

Moment theory { Equilibrium: $K_p = k_{in} / k_{out}$
 Kinetics: $\frac{d[\text{Complex}]}{dt} = \frac{3}{R_p} k_{in} [\text{Solute}] - \frac{3}{R_p} k_{out} [\text{Complex}]$



Kanji Miyabe



Kanji Miyabe

Equilibrium: $K_A = k_a/k_d$

Kinetics: $\frac{\partial [C]}{\partial t} = k_a[S][L] - k_d[C]$

Coordinate system S (x, y, z, t)

Moment equations

$$\mu_{1A} = \frac{Z}{v_s + v_x K_d C_2} (1 + K_d C_2)$$

$$\mu_{2C} = \frac{2Z}{(v_s + v_x K_d C_2)^2} [D_{12} (1 + K_d C_2)^2 + \frac{k_a}{k_d} C_2 v_s^2]$$

Position (μ_{1A})
Variance (μ_{2C})

Kinetics (k_a, k_d)
Moment analysis
Inverse Galilean transformation

Galilean transformation* (Principle of relativity)

Coordinate system S' (x', y', z', t')

Moment equations

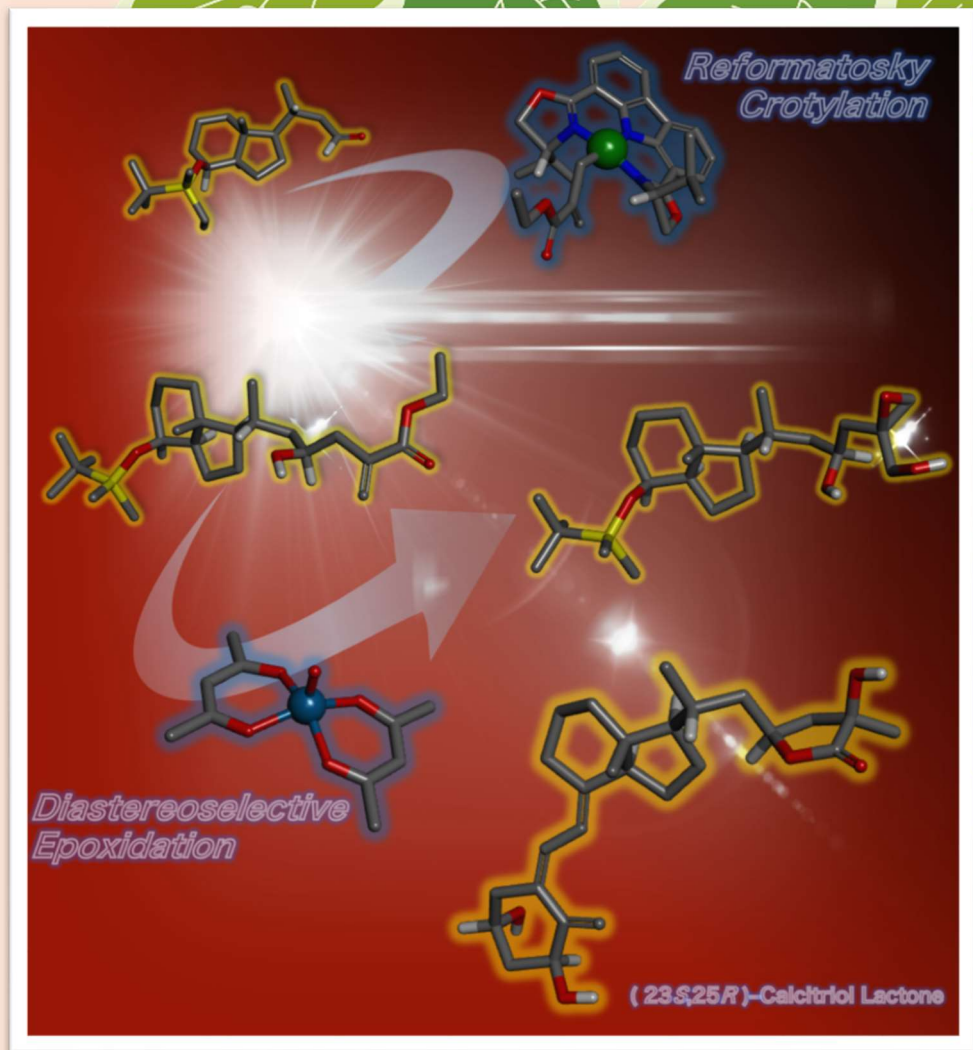
$$\mu'_{1A} - \frac{t}{2} = \frac{Z'}{v'_s} (1 + \frac{k_a}{k_d} C_2)$$

$$\mu'_{2C} - \frac{t^2}{12} = \frac{Z'}{v'_s} [\frac{2D_{12}}{v'_s} (1 + \frac{k_a}{k_d} C_2)^2 + \frac{2k_a}{k_d} C_2]$$

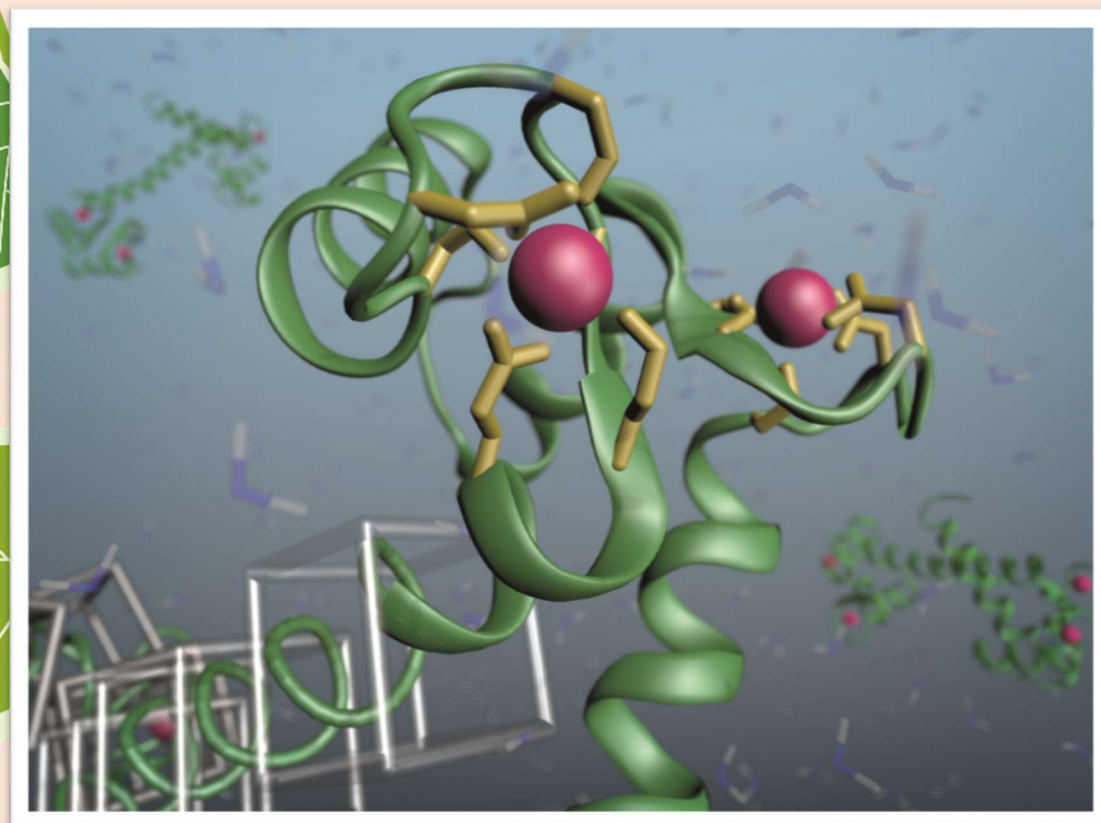
Position (μ'_{1A})
Variance (μ'_{2C})

*** $\begin{cases} x' = x \\ y' = y \\ z' = z - v_x t \\ t' = t \end{cases}$**

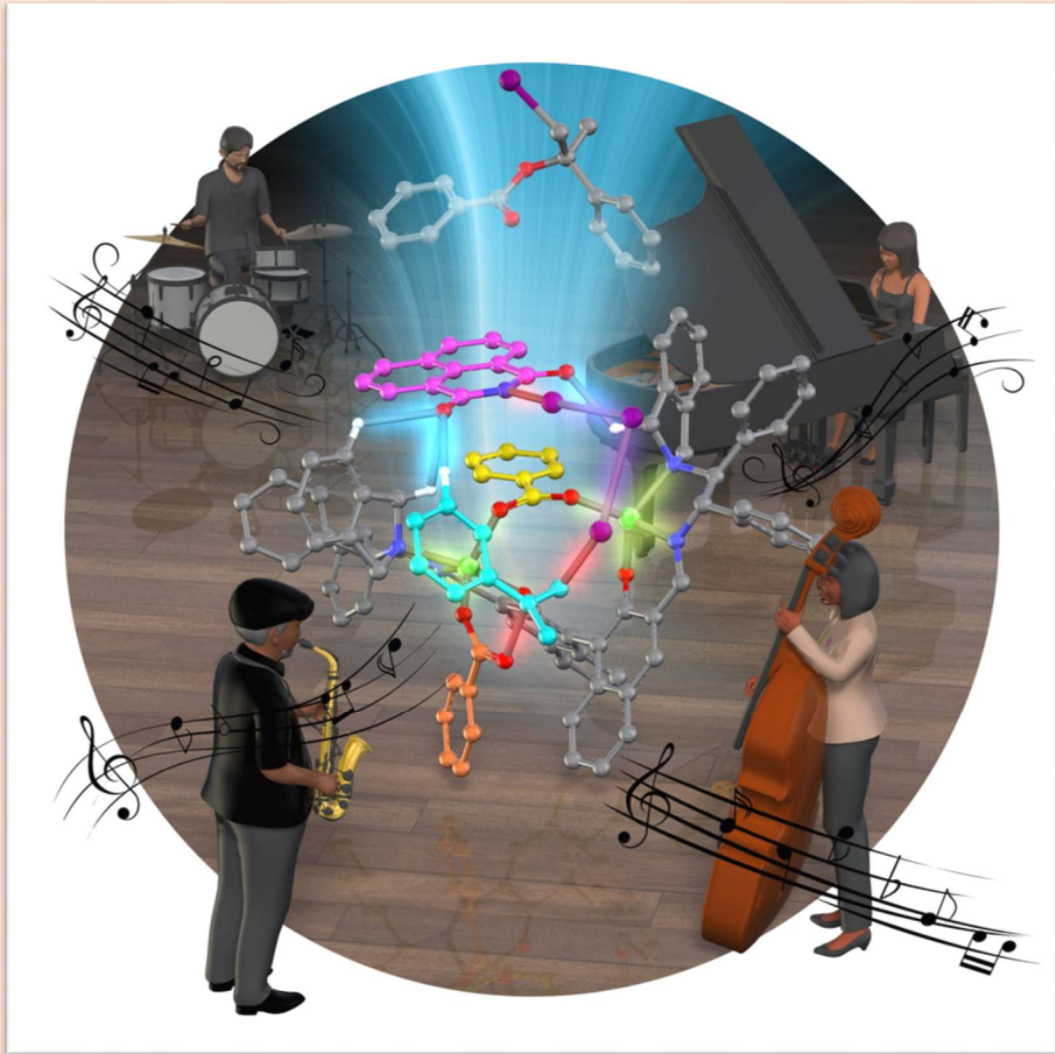
Kanji Miyabe



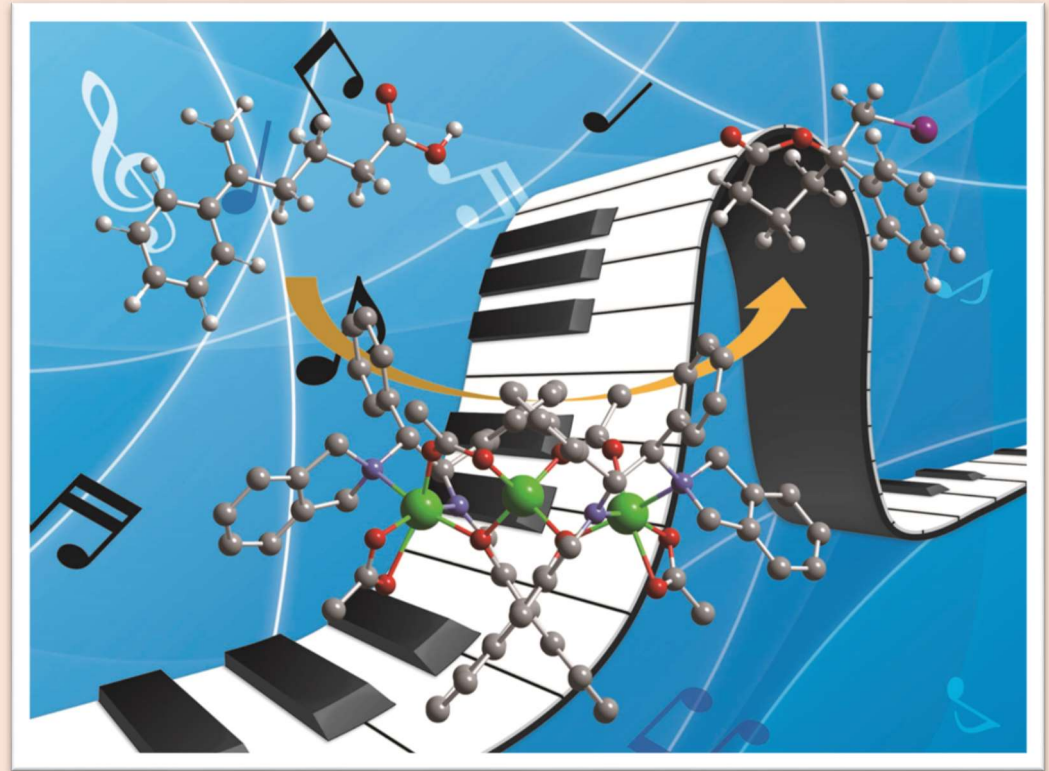
Masahiro Yamanaka



Yuji Mochizuki

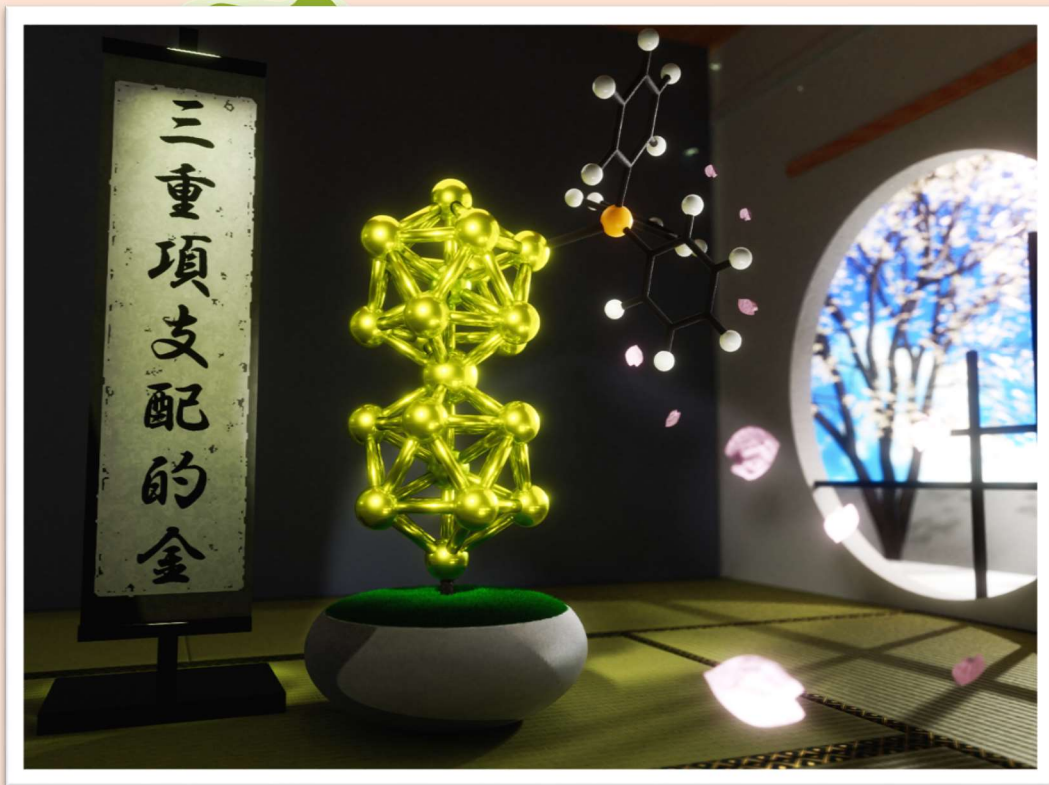


Masahiro Yamanaka



Masahiro Yamanaka

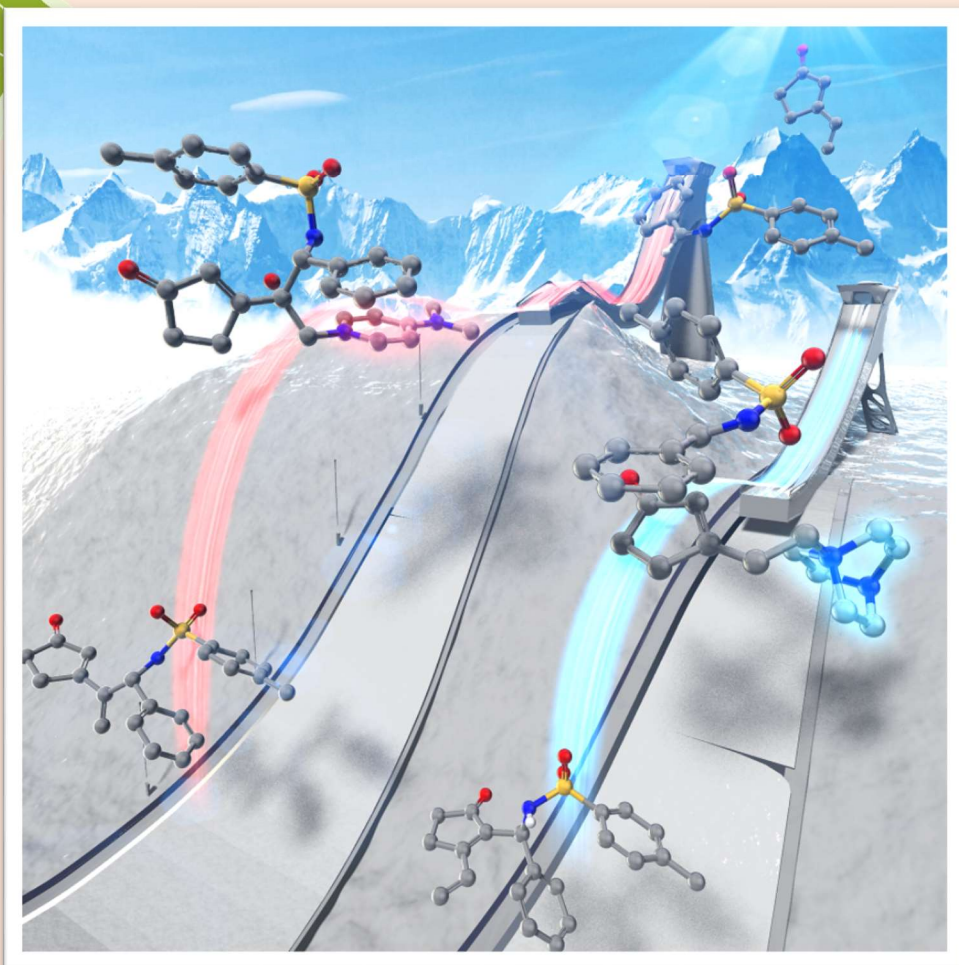




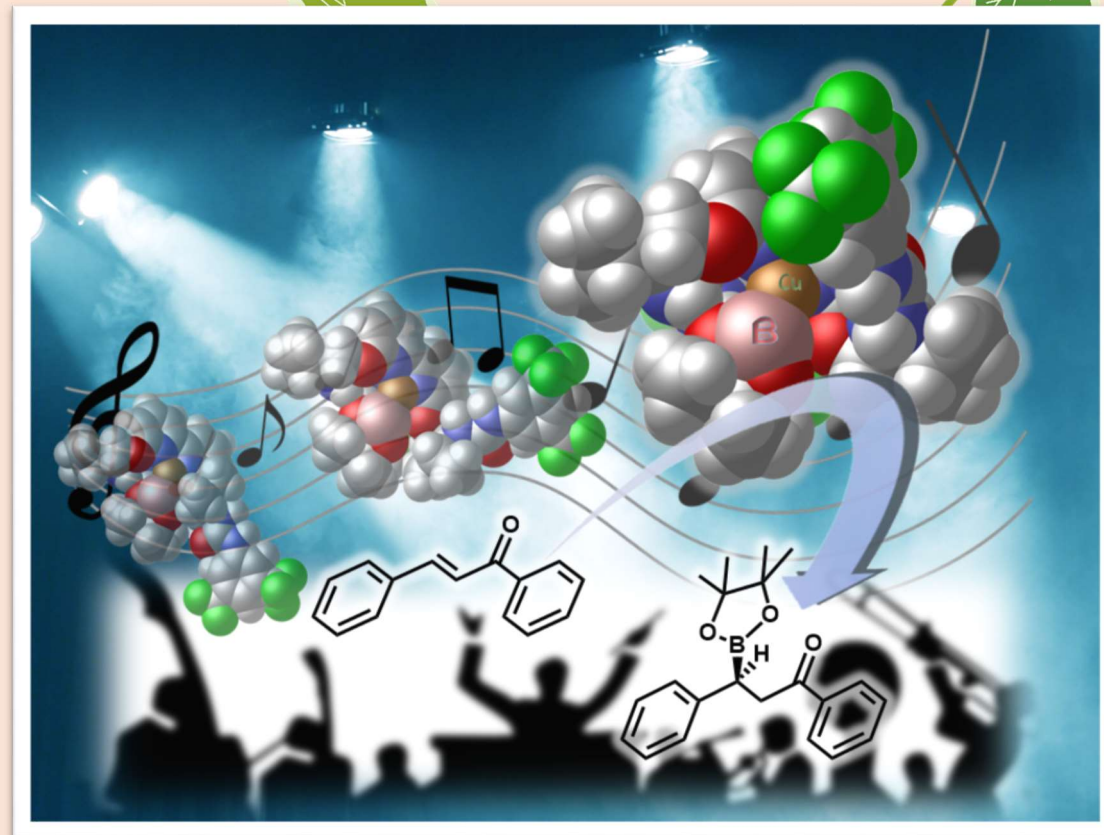
Masaaki Mitsui



Masaaki Mitsui



Masahiro Yamanaka



Masahiro Yamanaka



立教化学画廊 Rikkyo Chem-Arts Gallery

これらの作品の基となっている研究は
立教大学理学部化学科ホームページ「化学科Webブック」に
掲載されています。



立教大学 理学部 化学科