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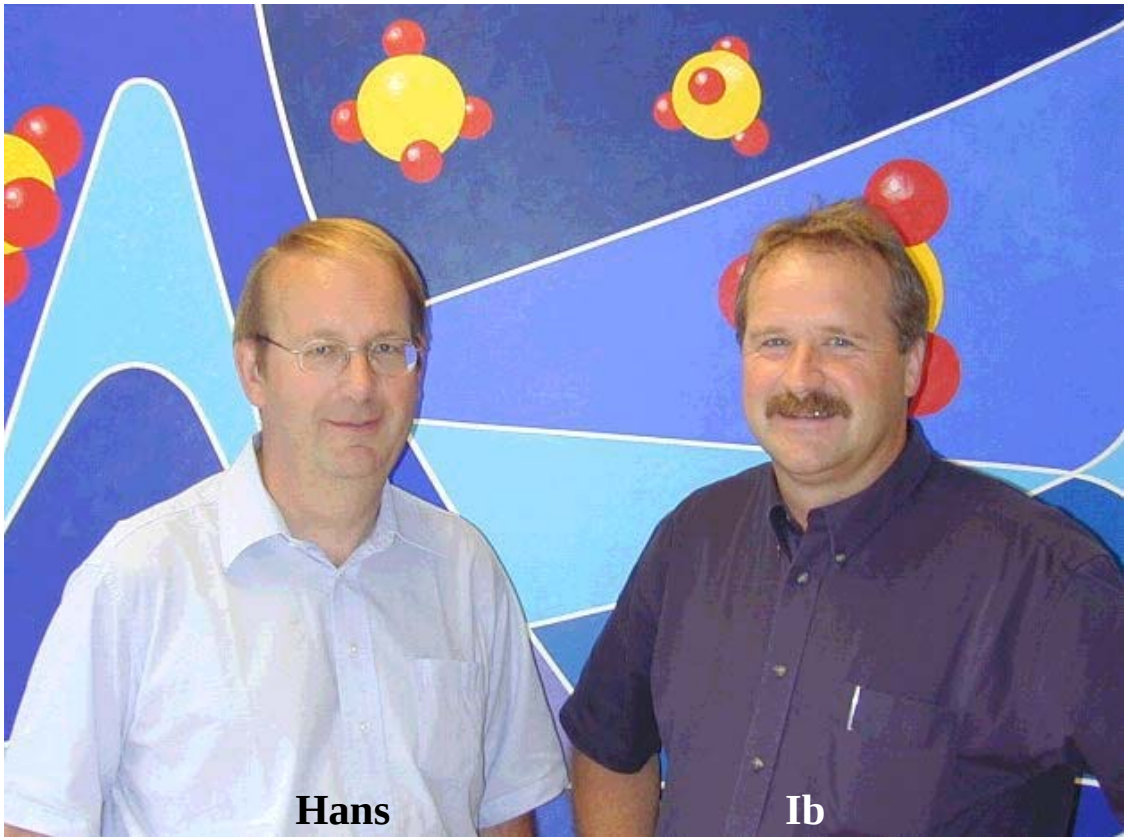

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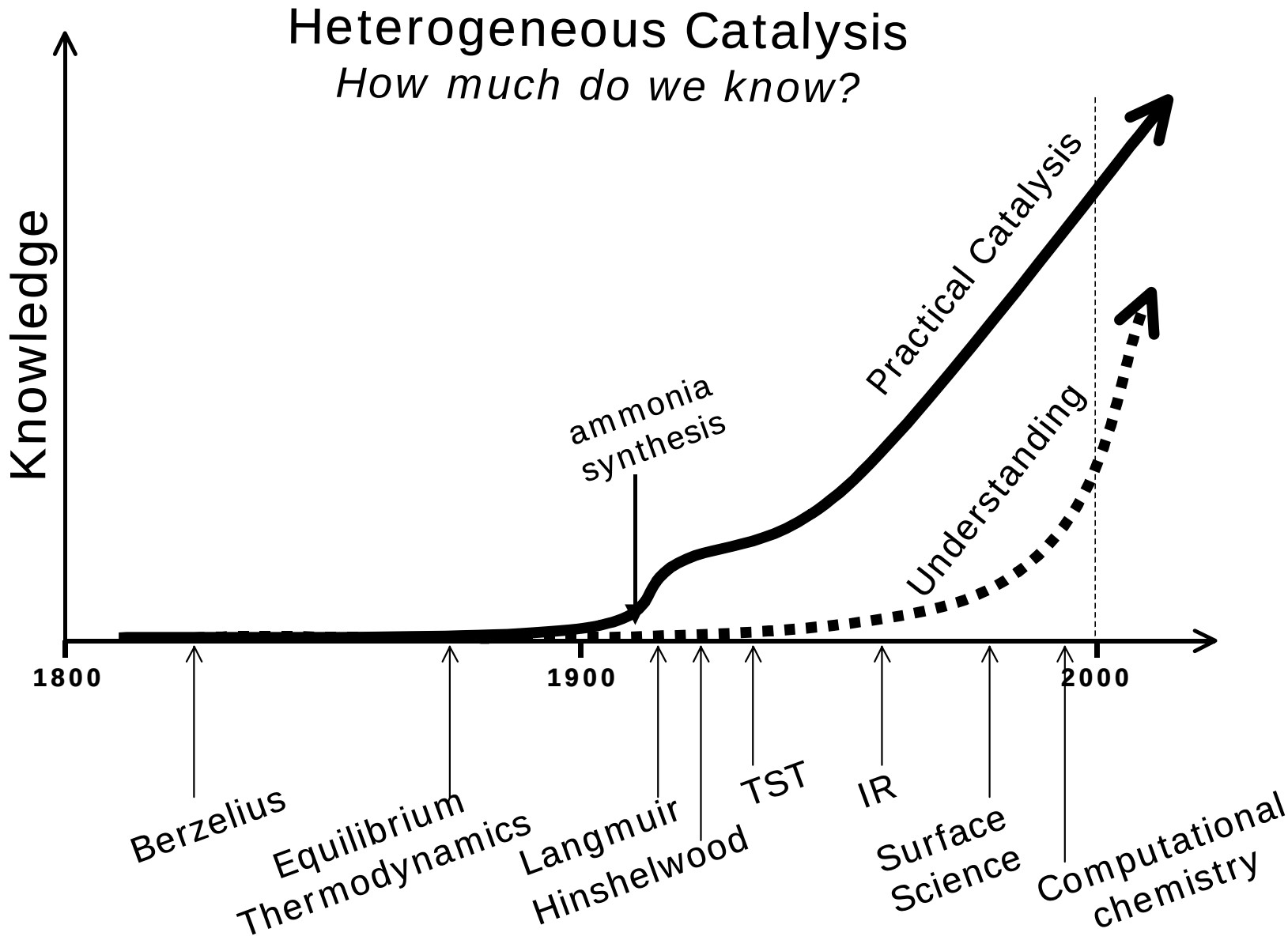

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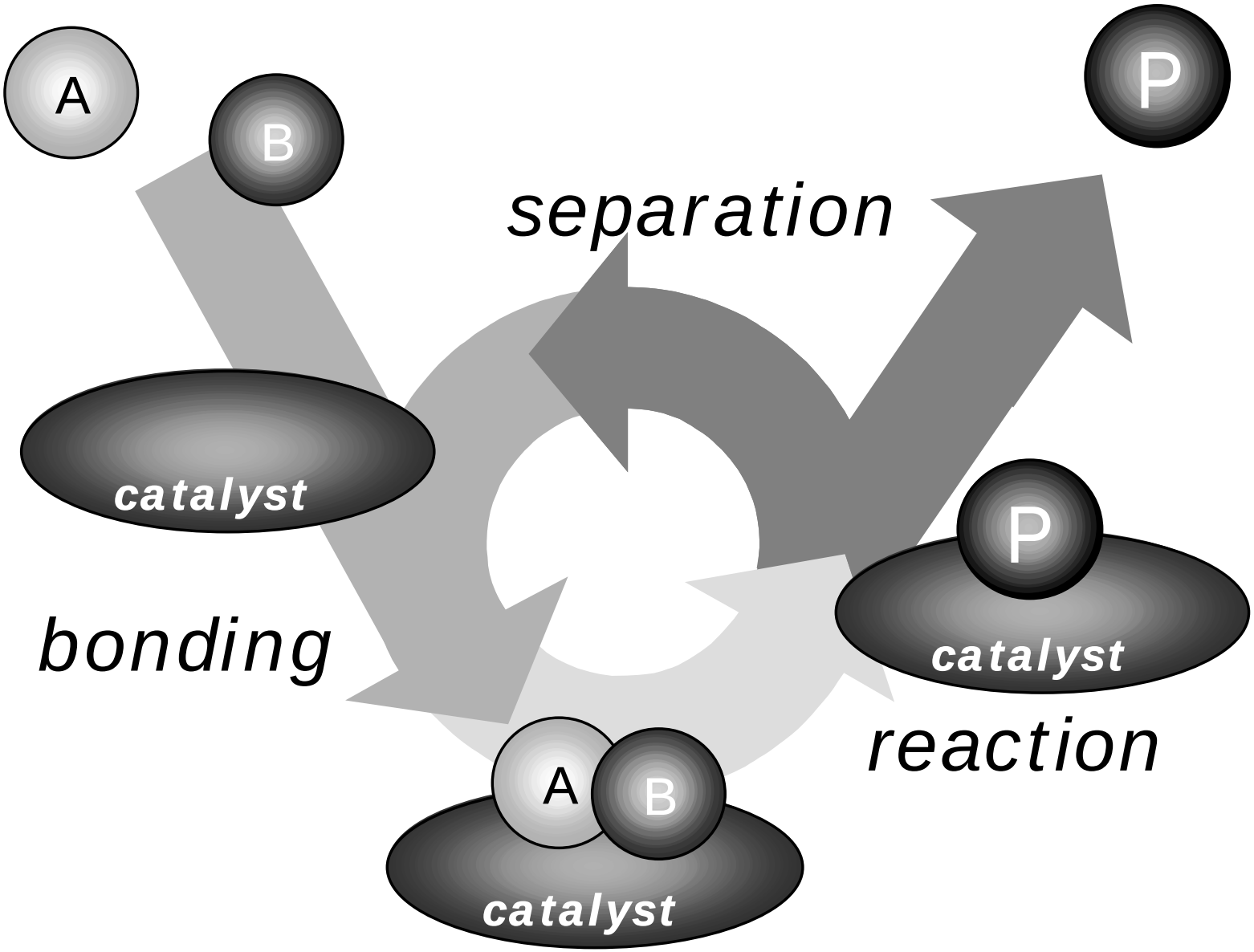

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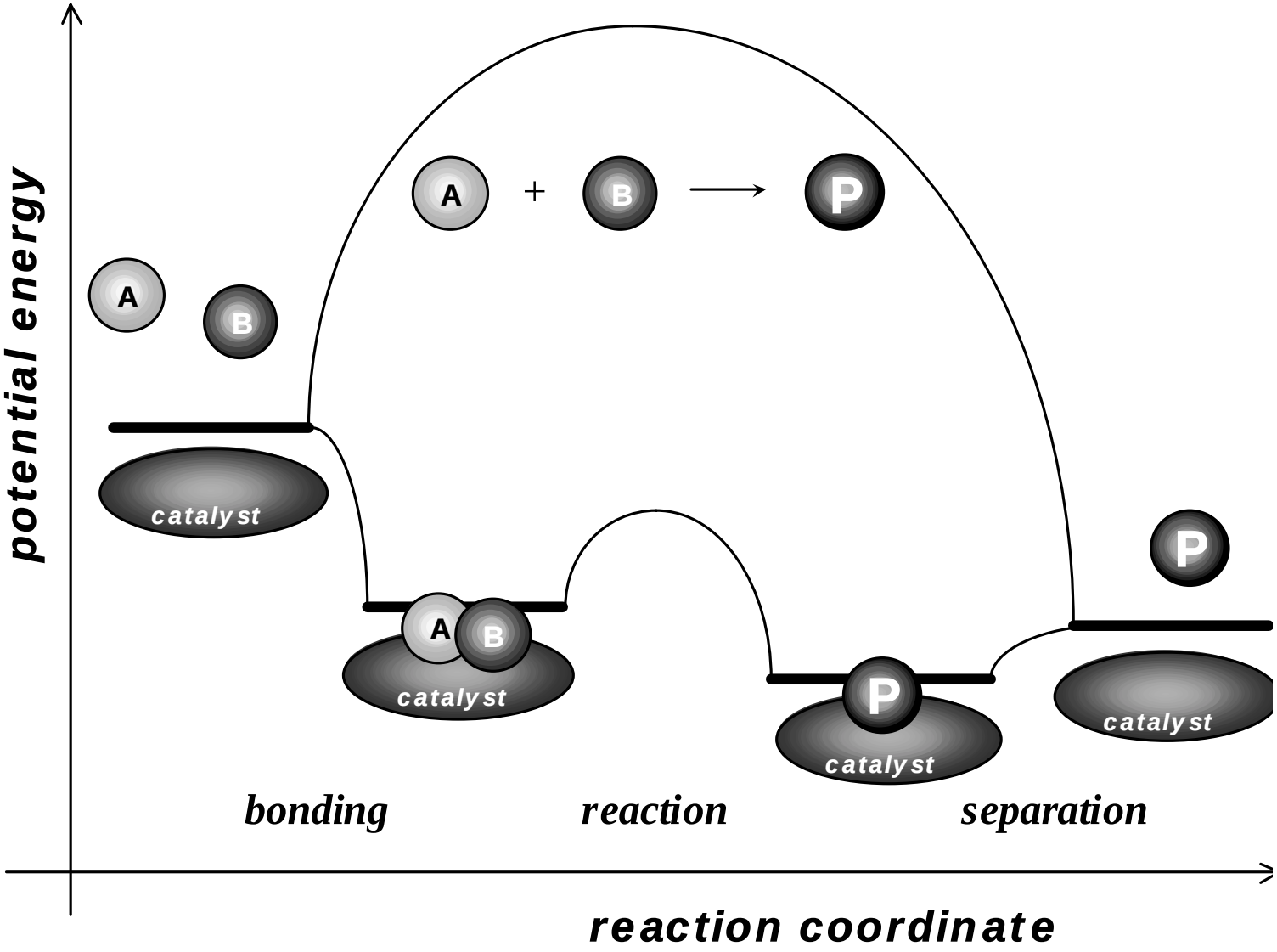

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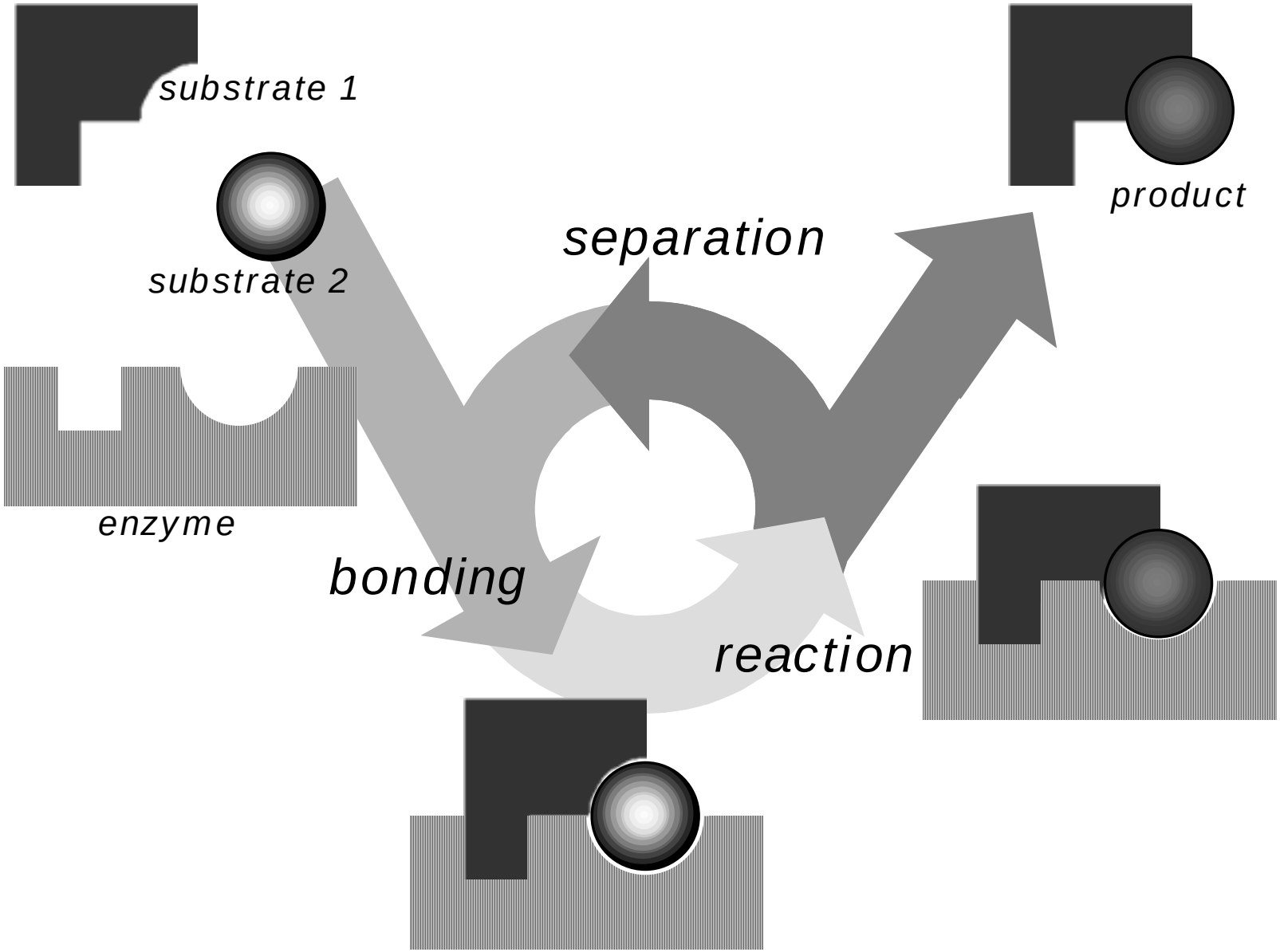

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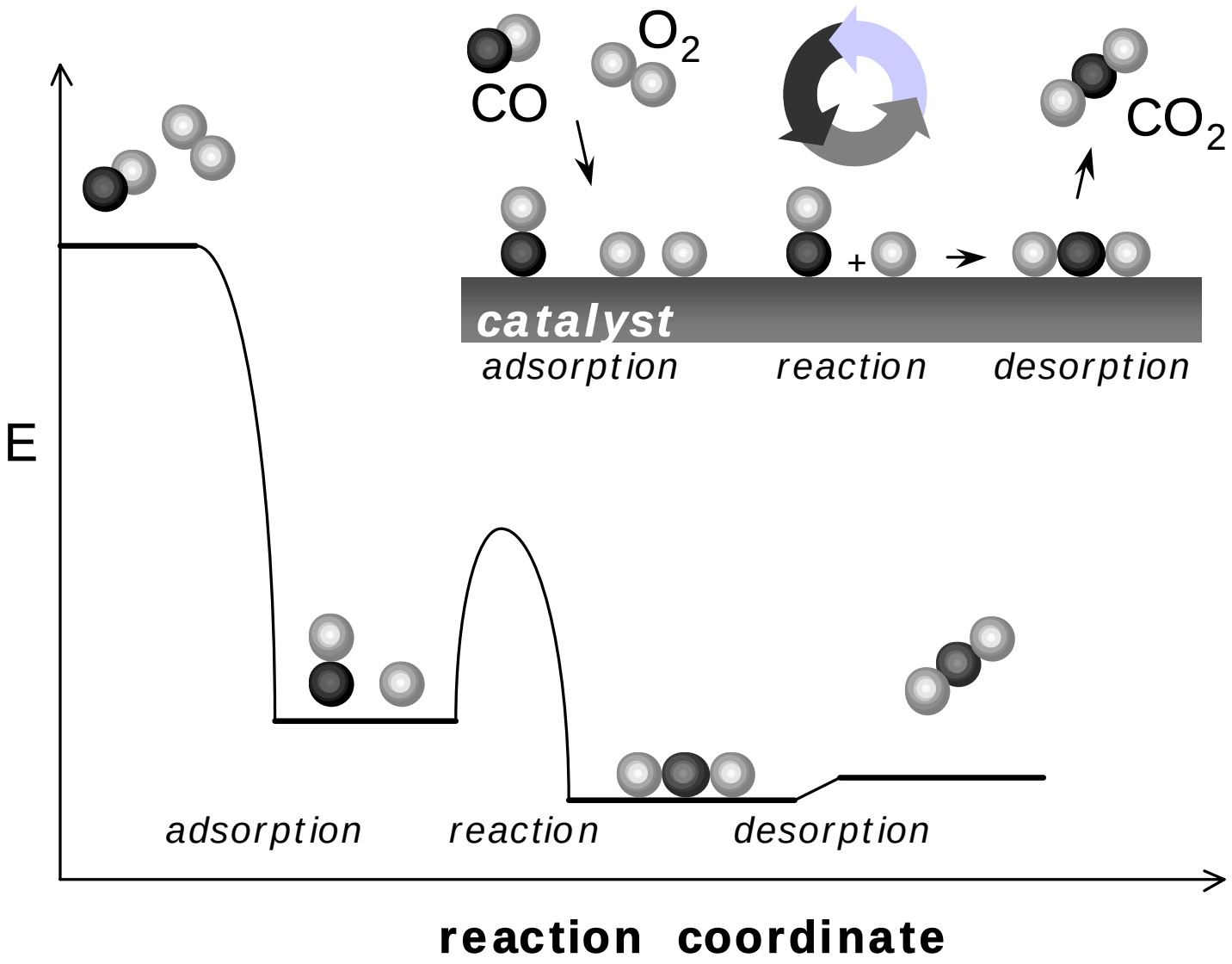

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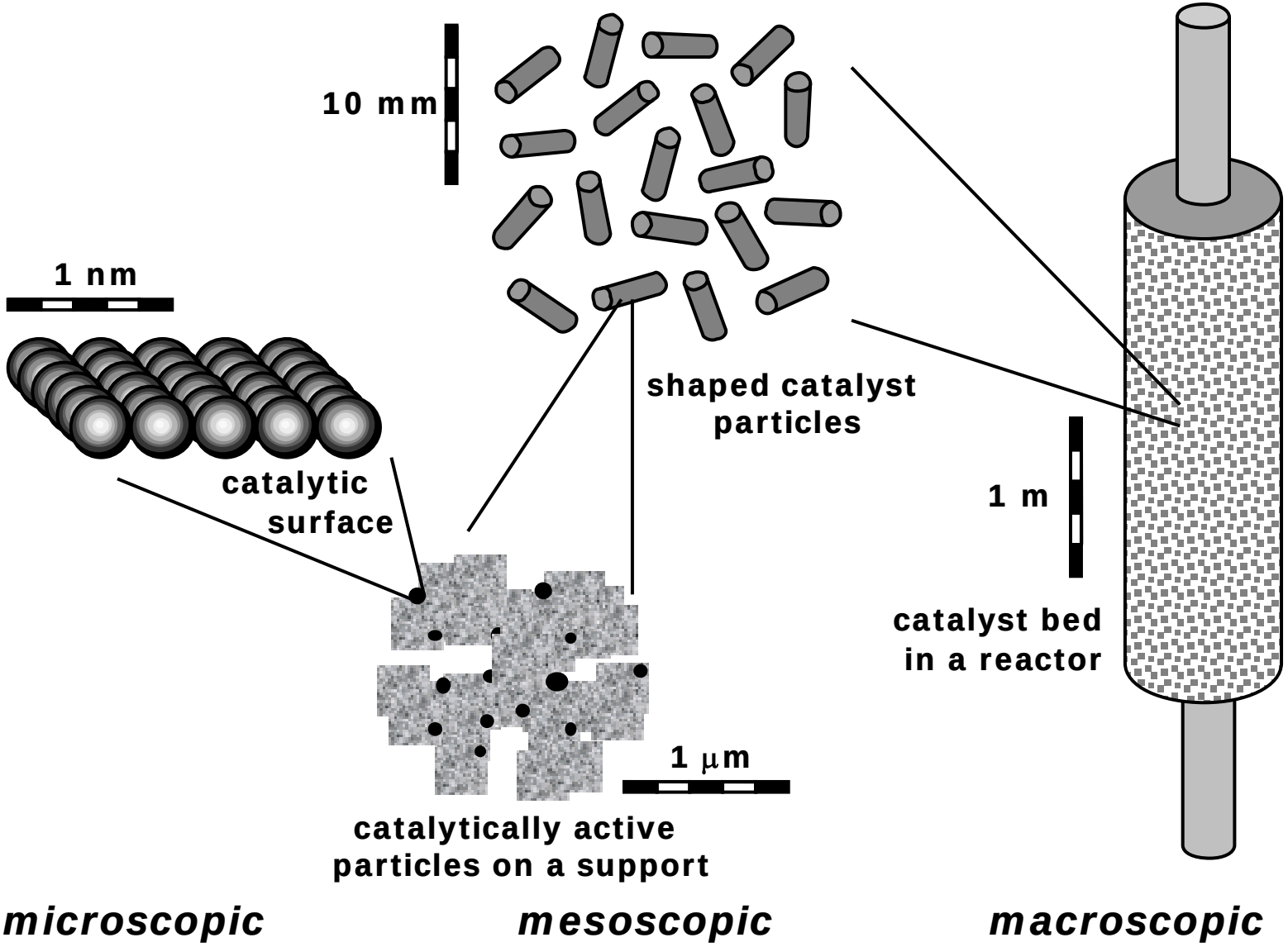

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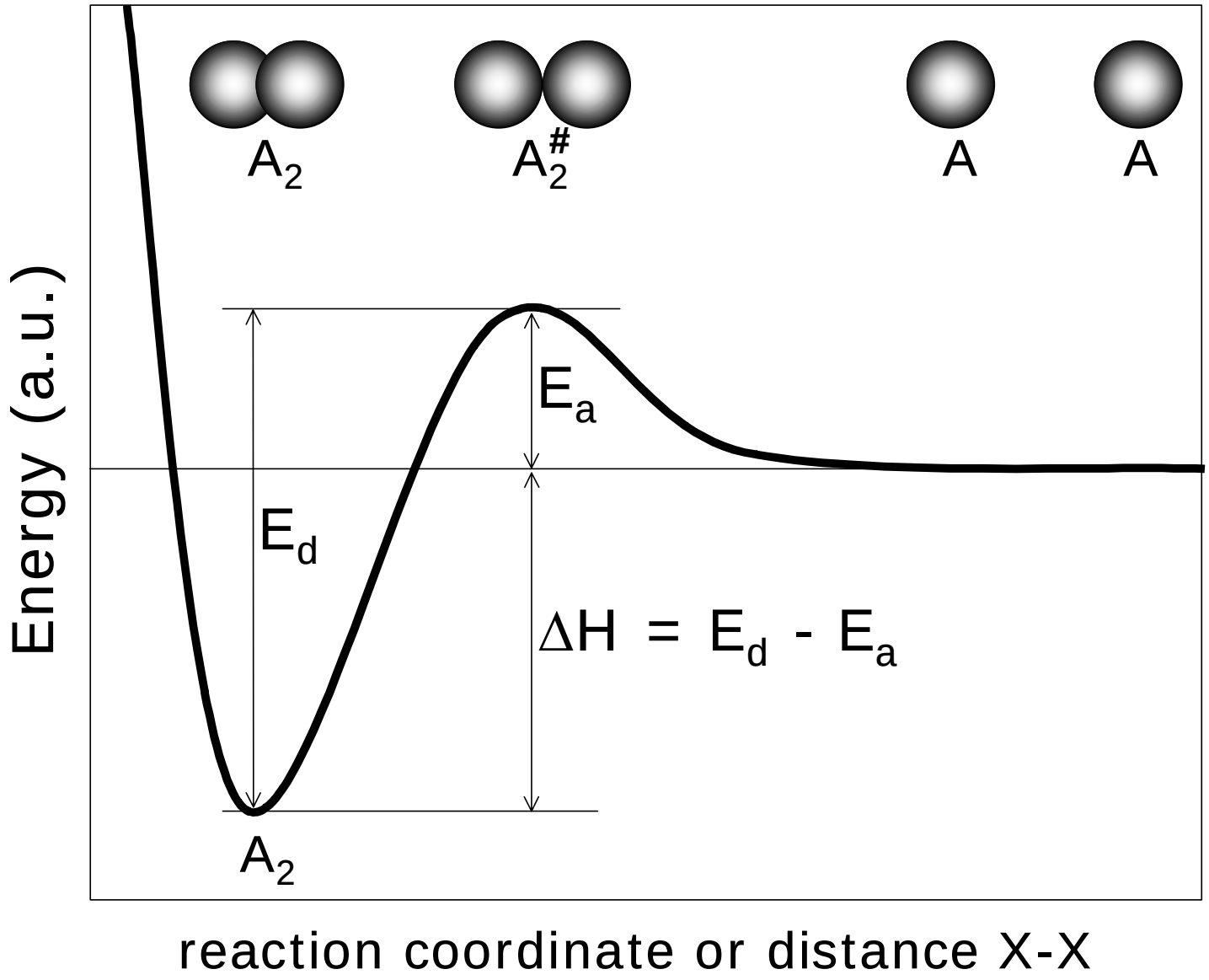

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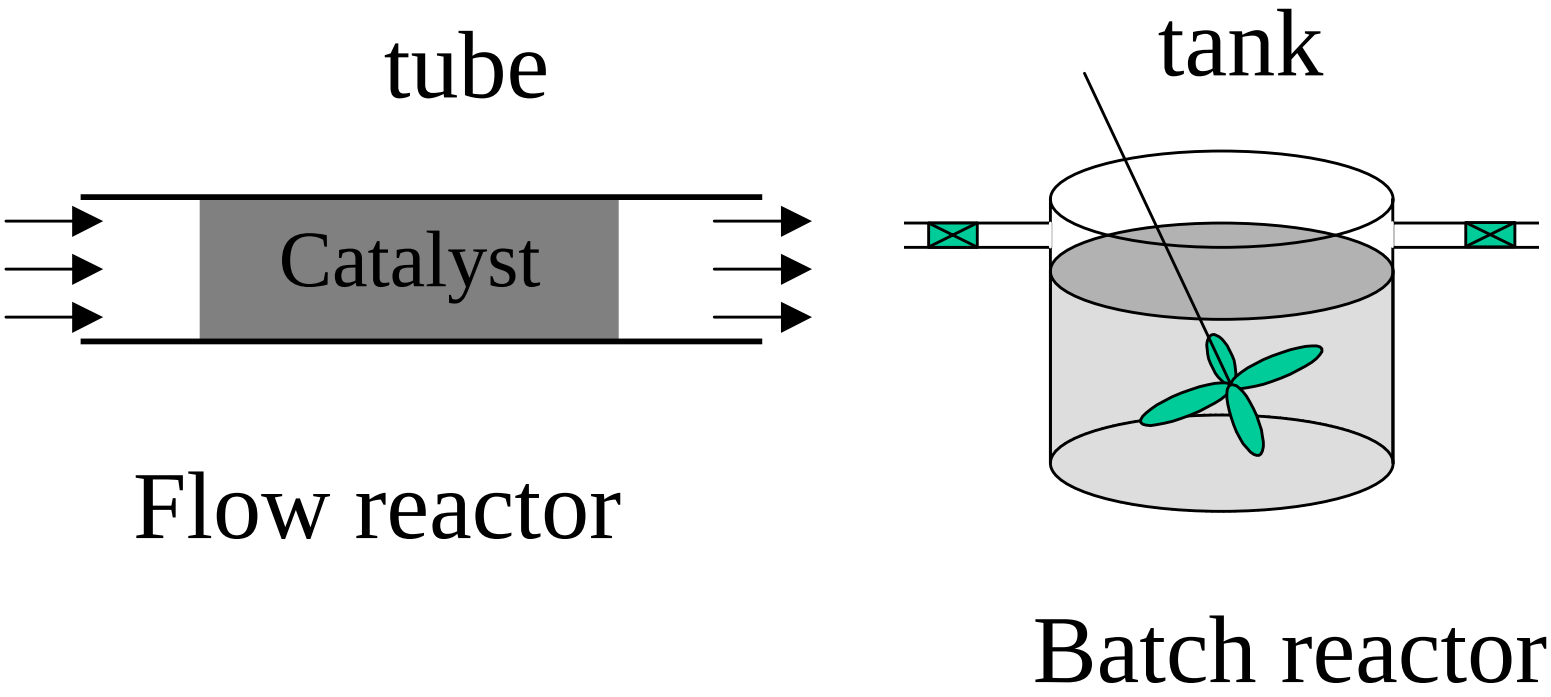

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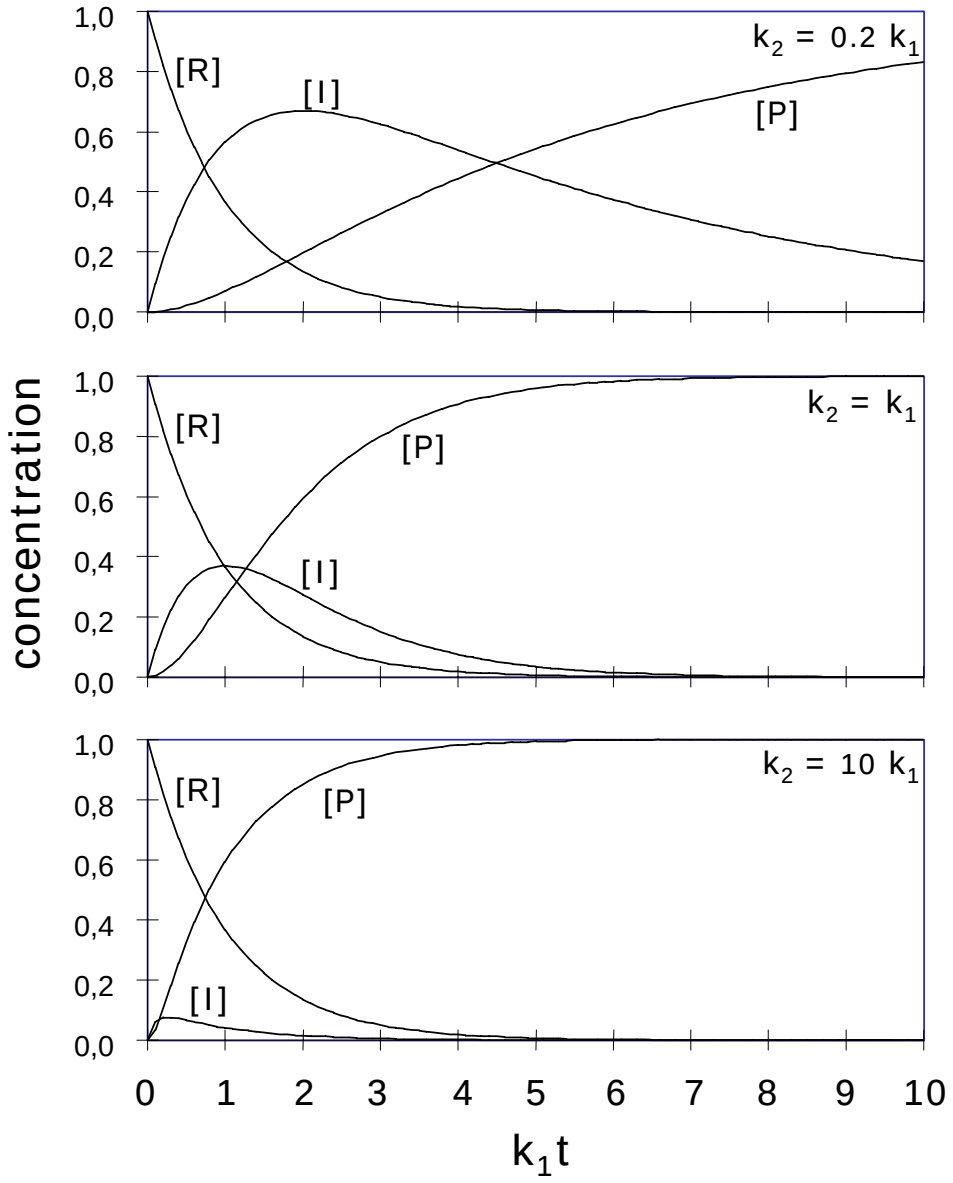

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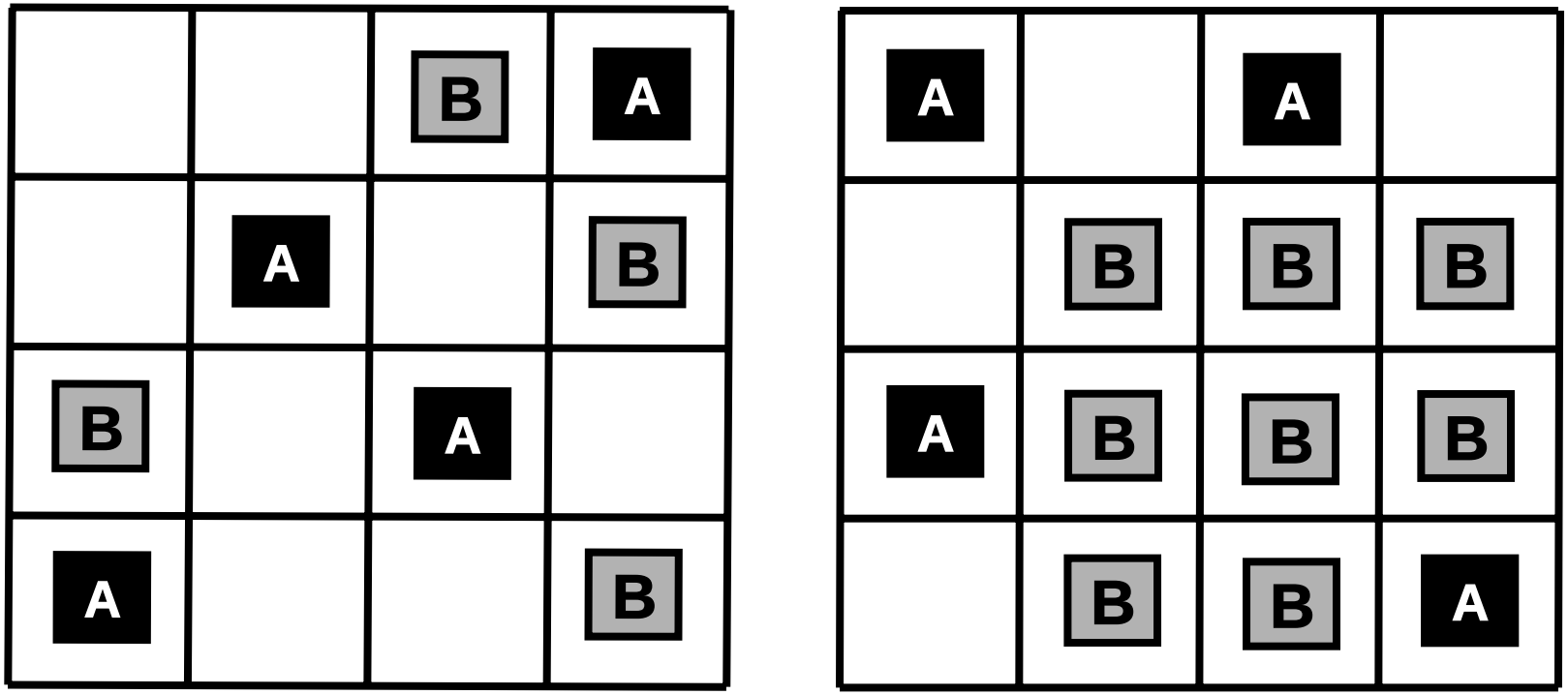

random *ordered*

$r = N k \theta_A \theta_B$ $r < N k \theta_A \theta_B$

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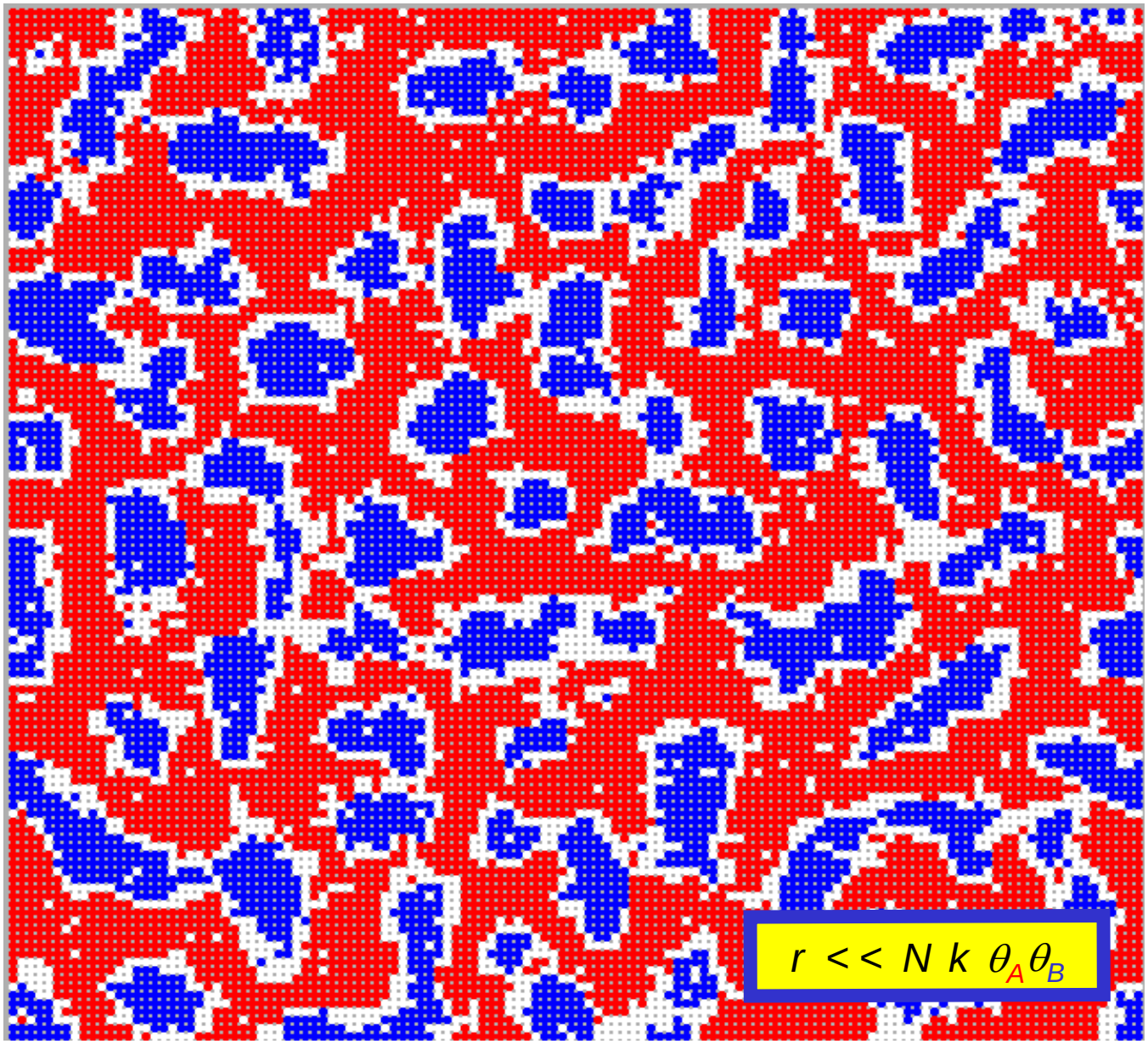

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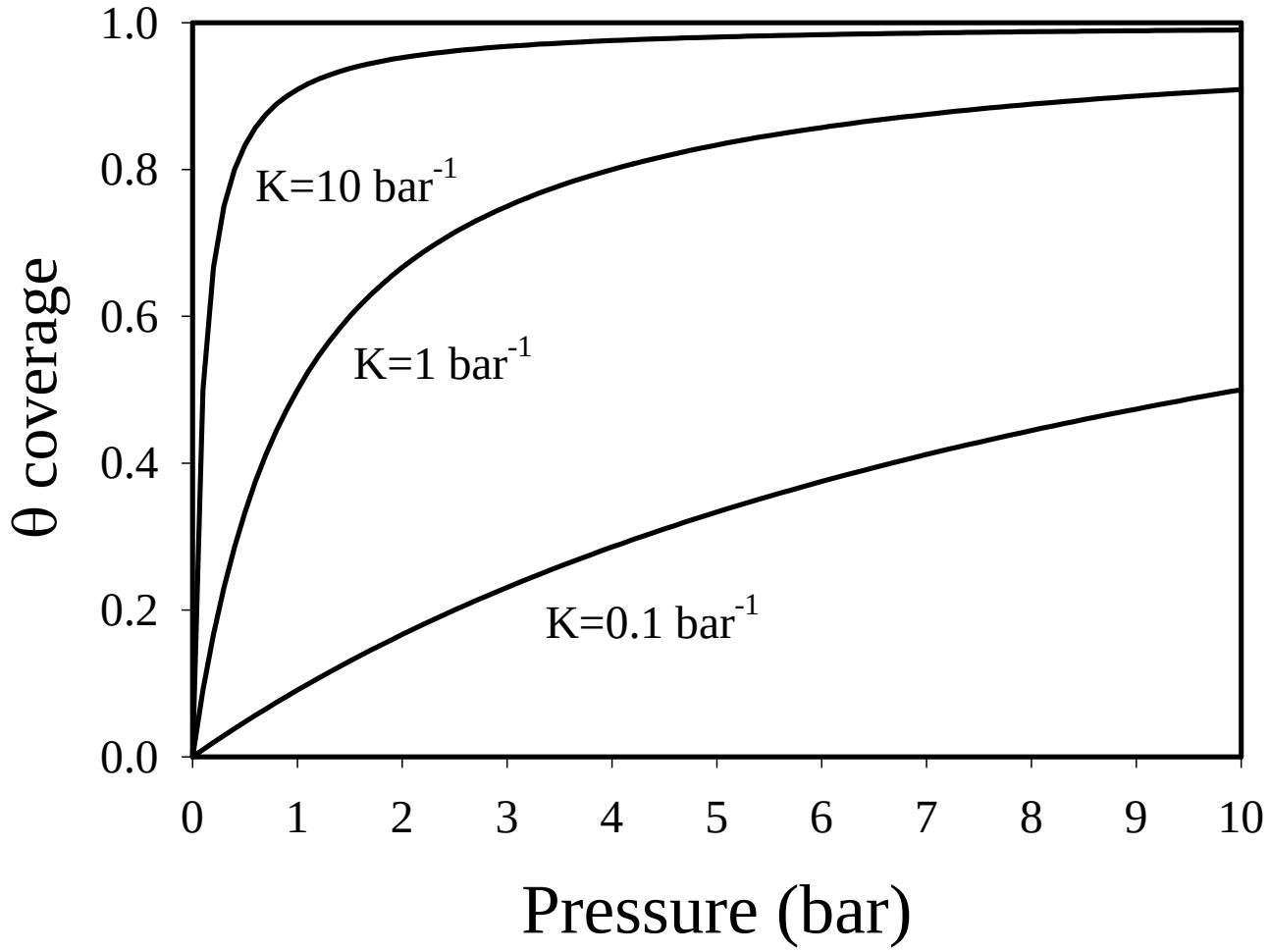

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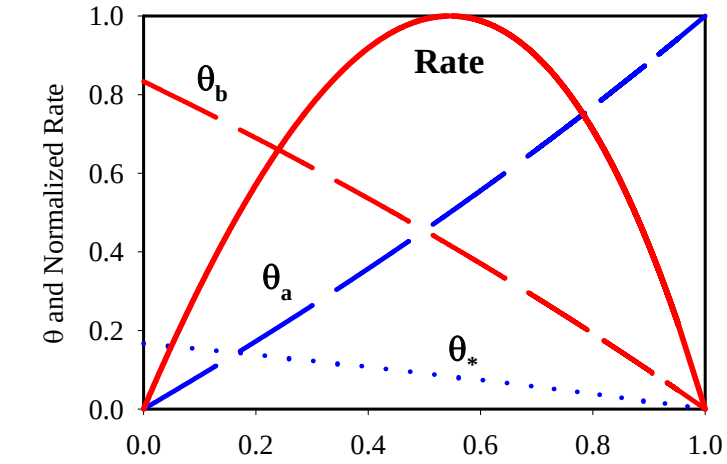
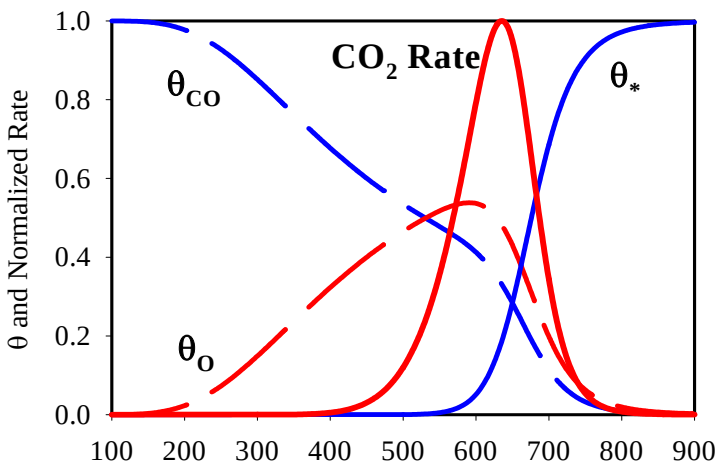
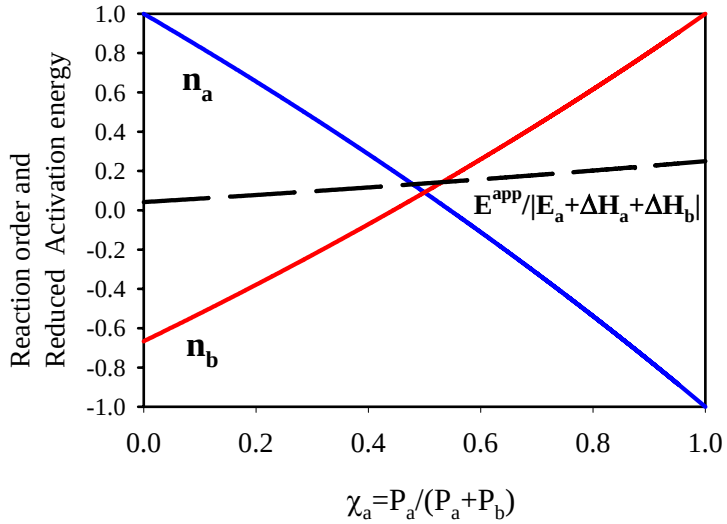
Figure 2.10

K_a=1 at 600 K, ΔH_a=-125kJ/mol
K_b=1 at 600 K, ΔH_b=-125kJ/mol, K_{ab} small,
k=1 at 540 K, E_a=+50kJ/mol, and P_b=5

CO oxidation, K_{CO}=1 at 650 K, ΔH_{CO}=-135kJ/mol
Ko_2=1 at 630 K, ΔH_{O_2}=-250kJ/mol, K_{CO_2} small,
k=1 at 540 K, E_a=50kJ/mol, P_{O_2}=10*P_{CO}, and P_{CO}=1







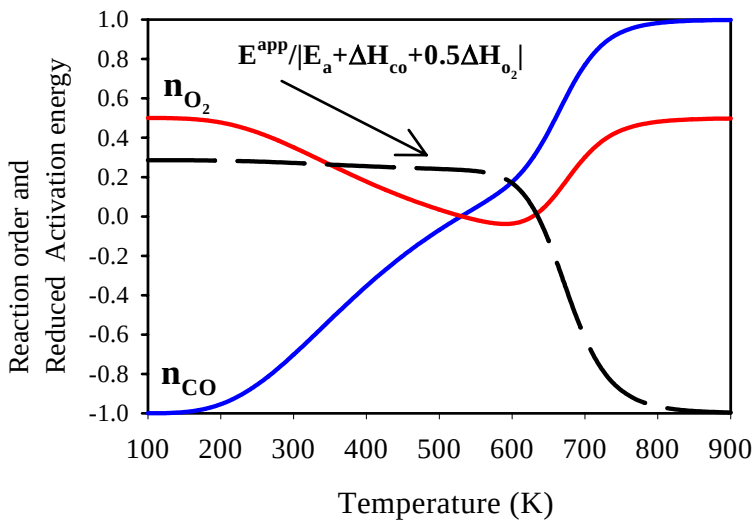


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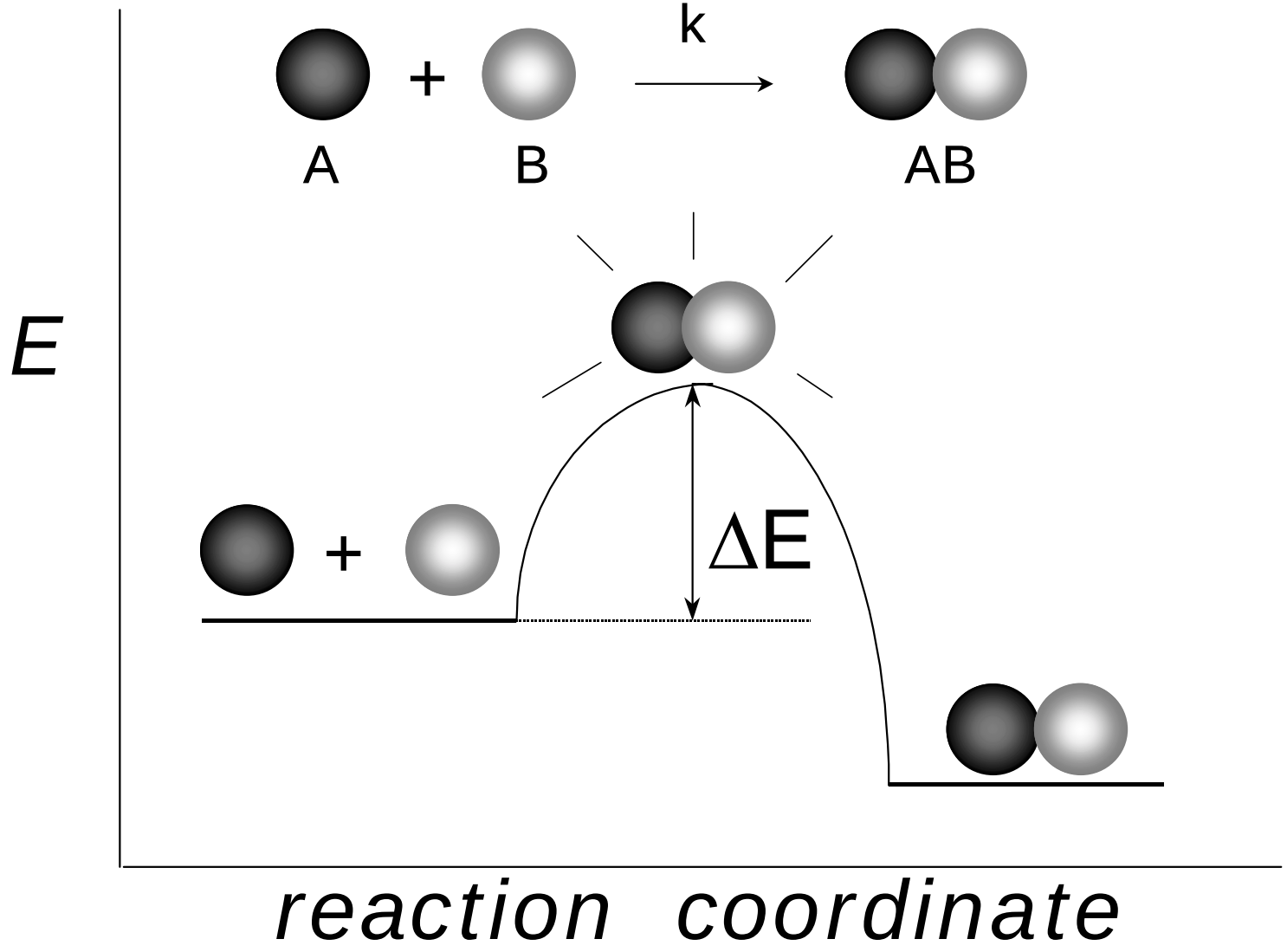
Figure 2.11 & 2.12



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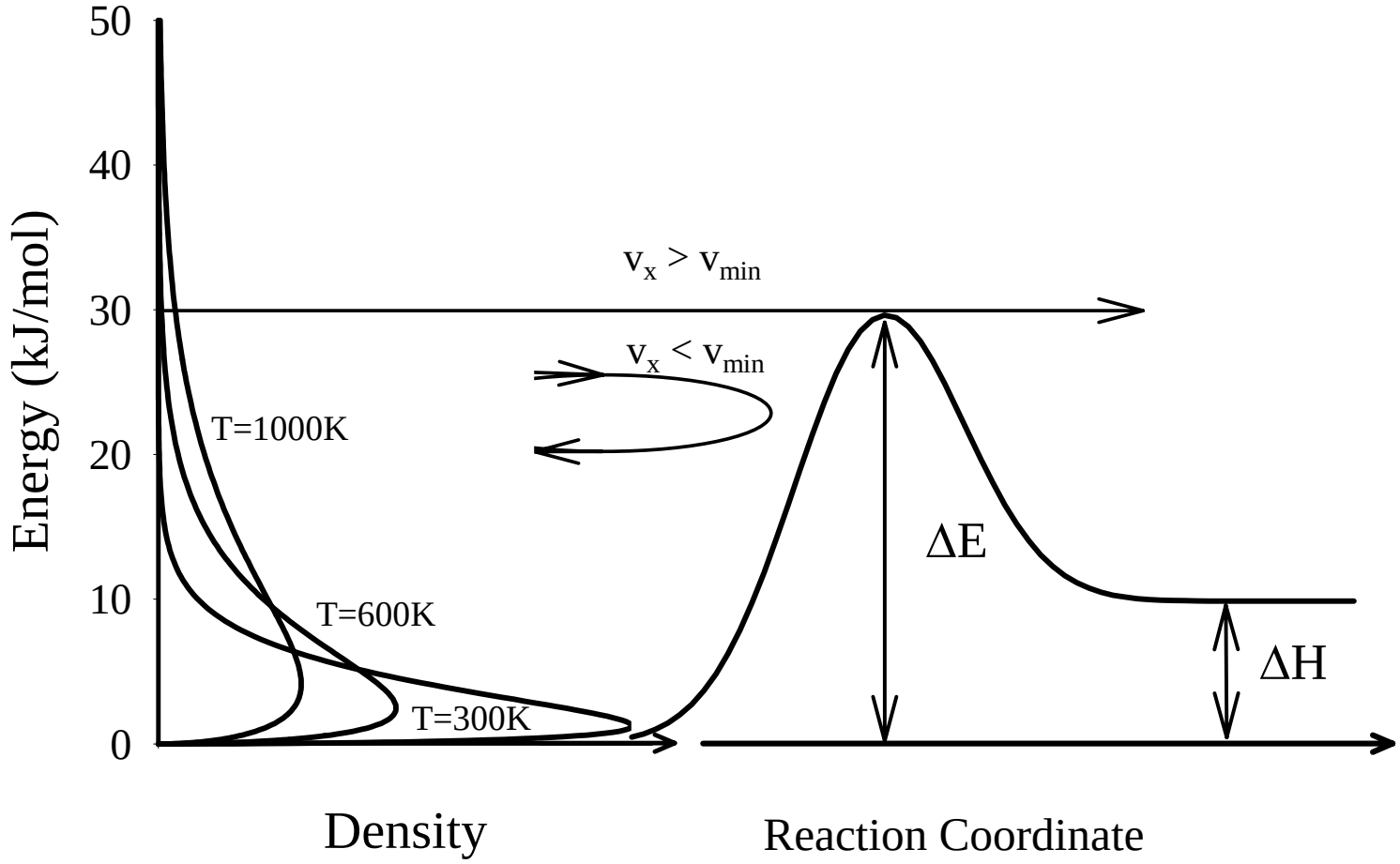

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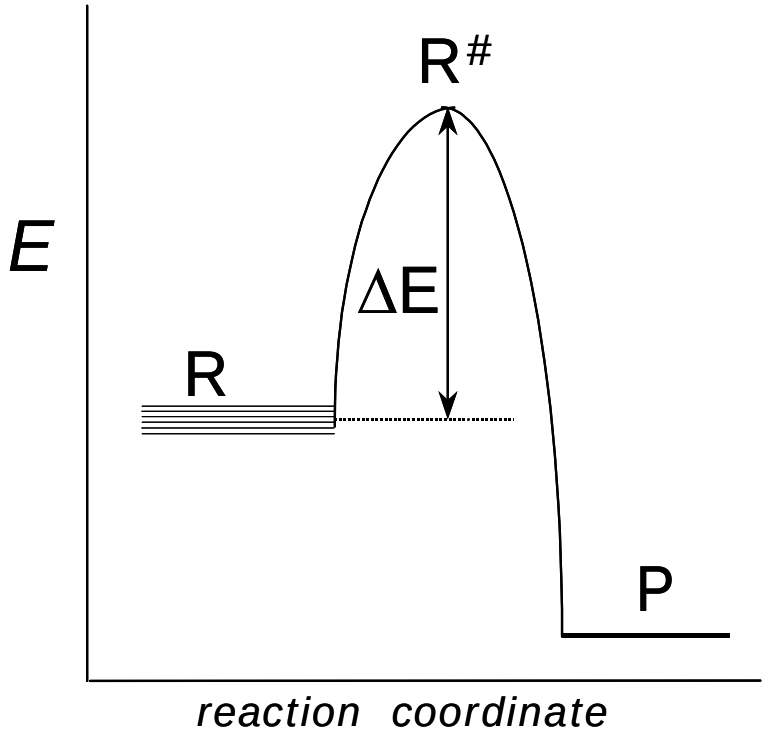
Figure 3.9

Tight TST:

$q^{\#} << q$

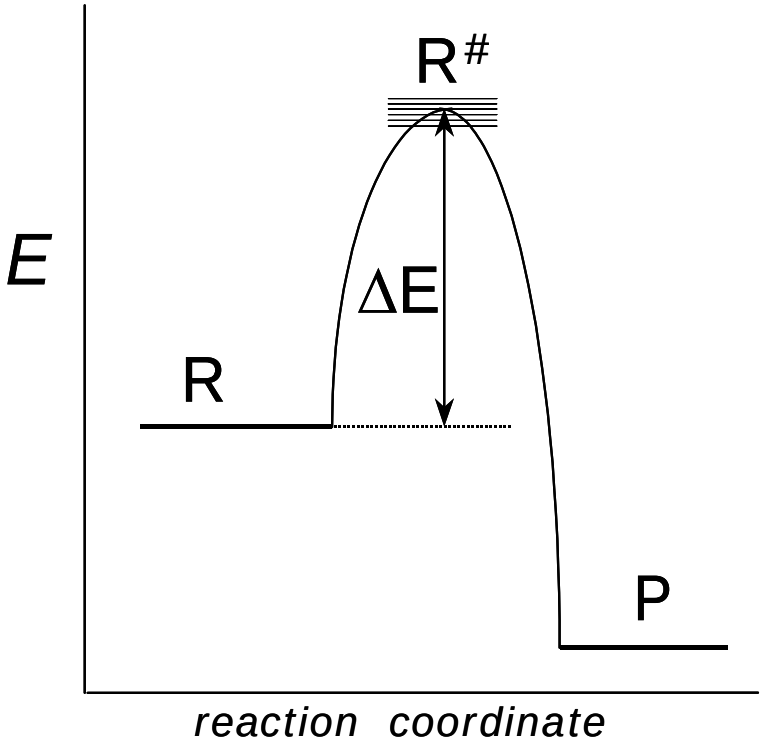


$10^9 < \nu < 10^{13}\ s^{-1}$

ΔS# negative

Loose TST:

$q^{\#} >> q$



$10^{13} < \nu < 10^{17}\ s^{-1}$

ΔS# positive

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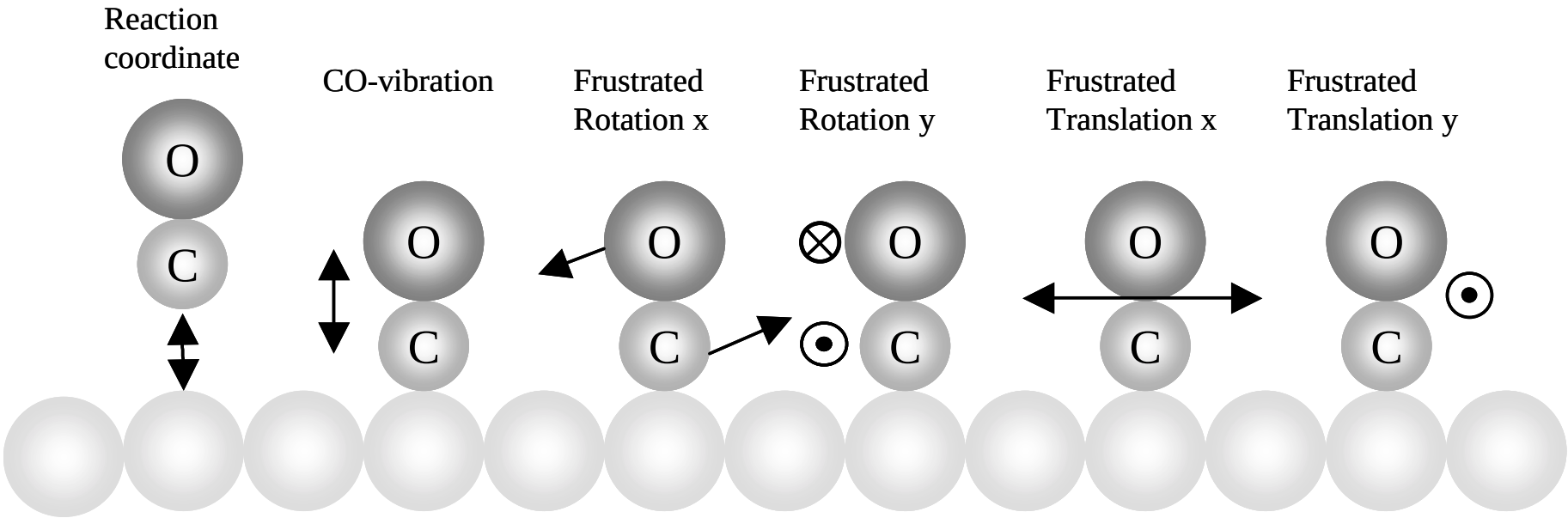

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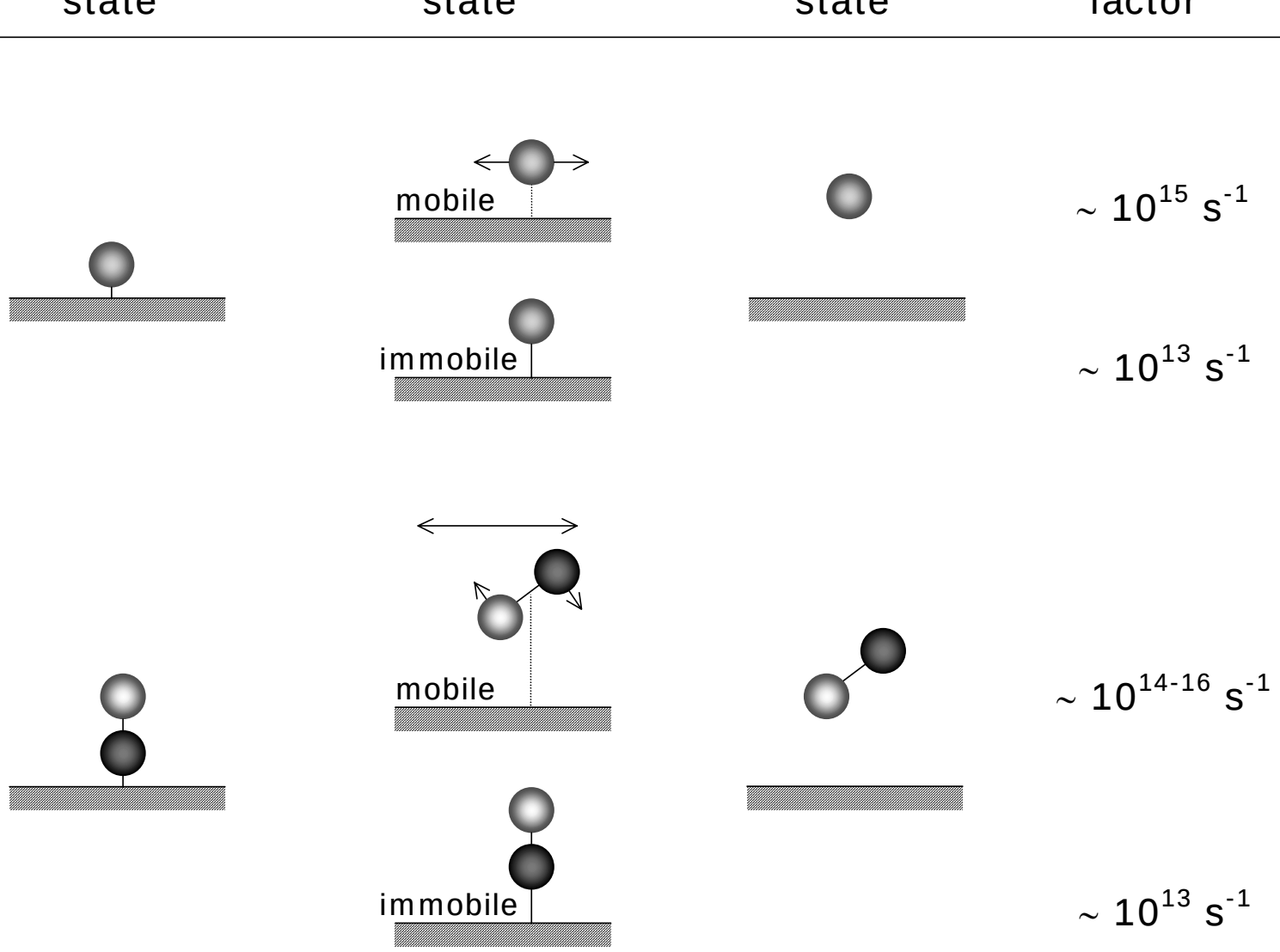

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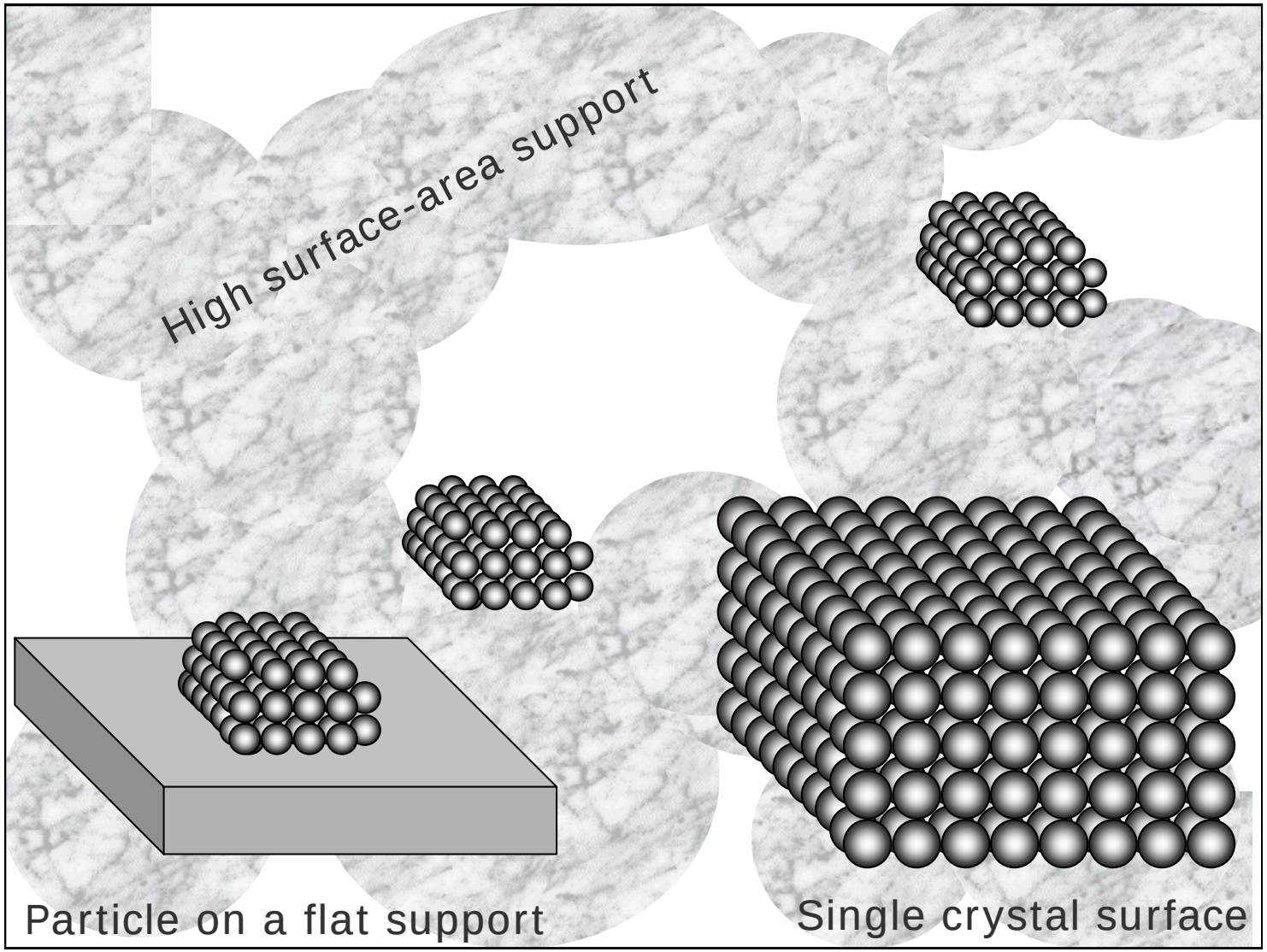

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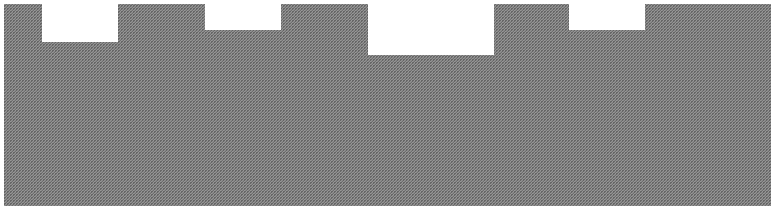

Roughness
- features are wider than they are deep
- only external surface area

Porosity
- features are deeper than they are wide
- internal and external surface area

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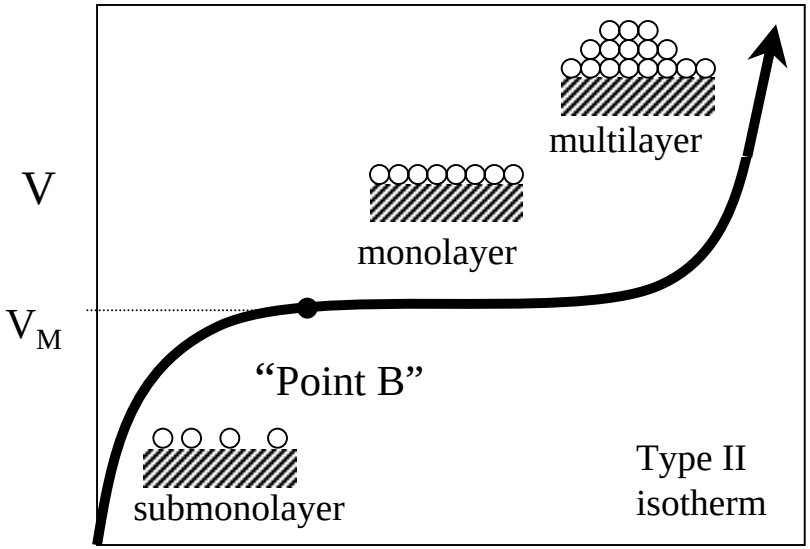

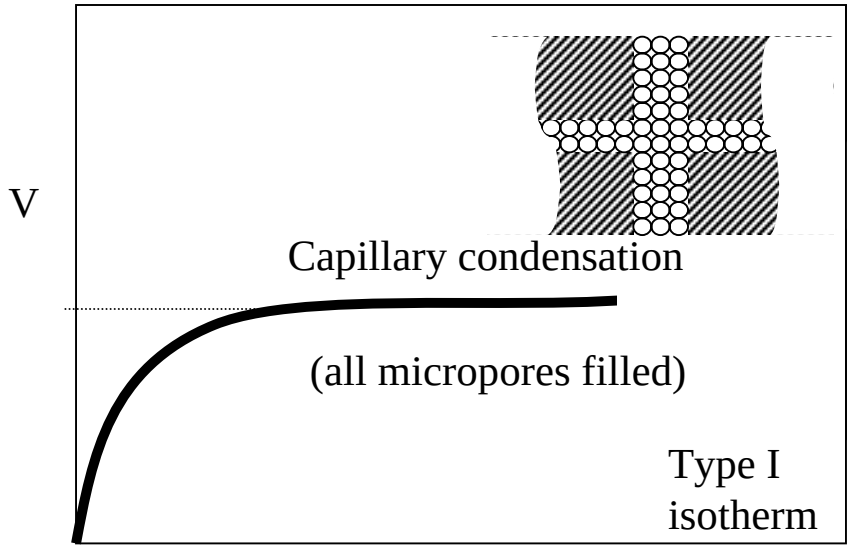

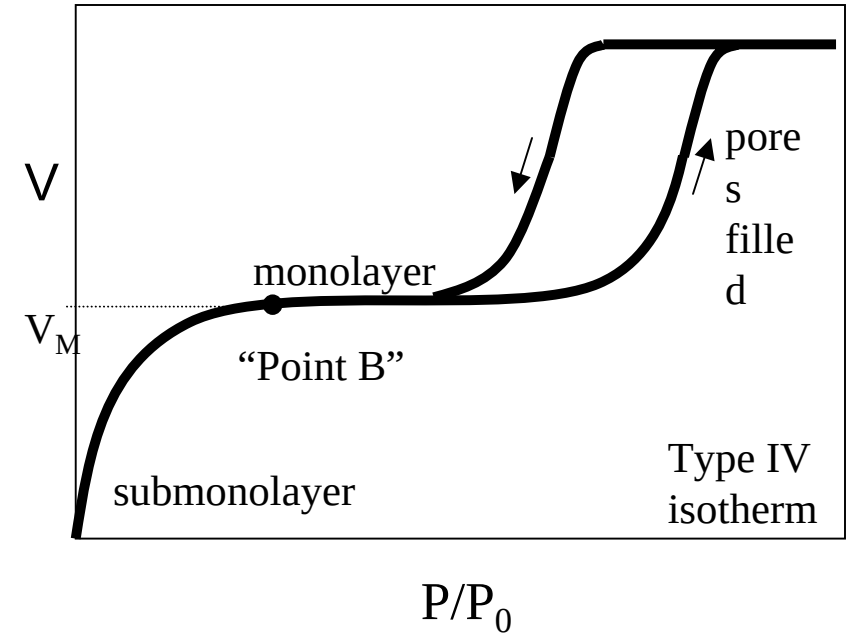

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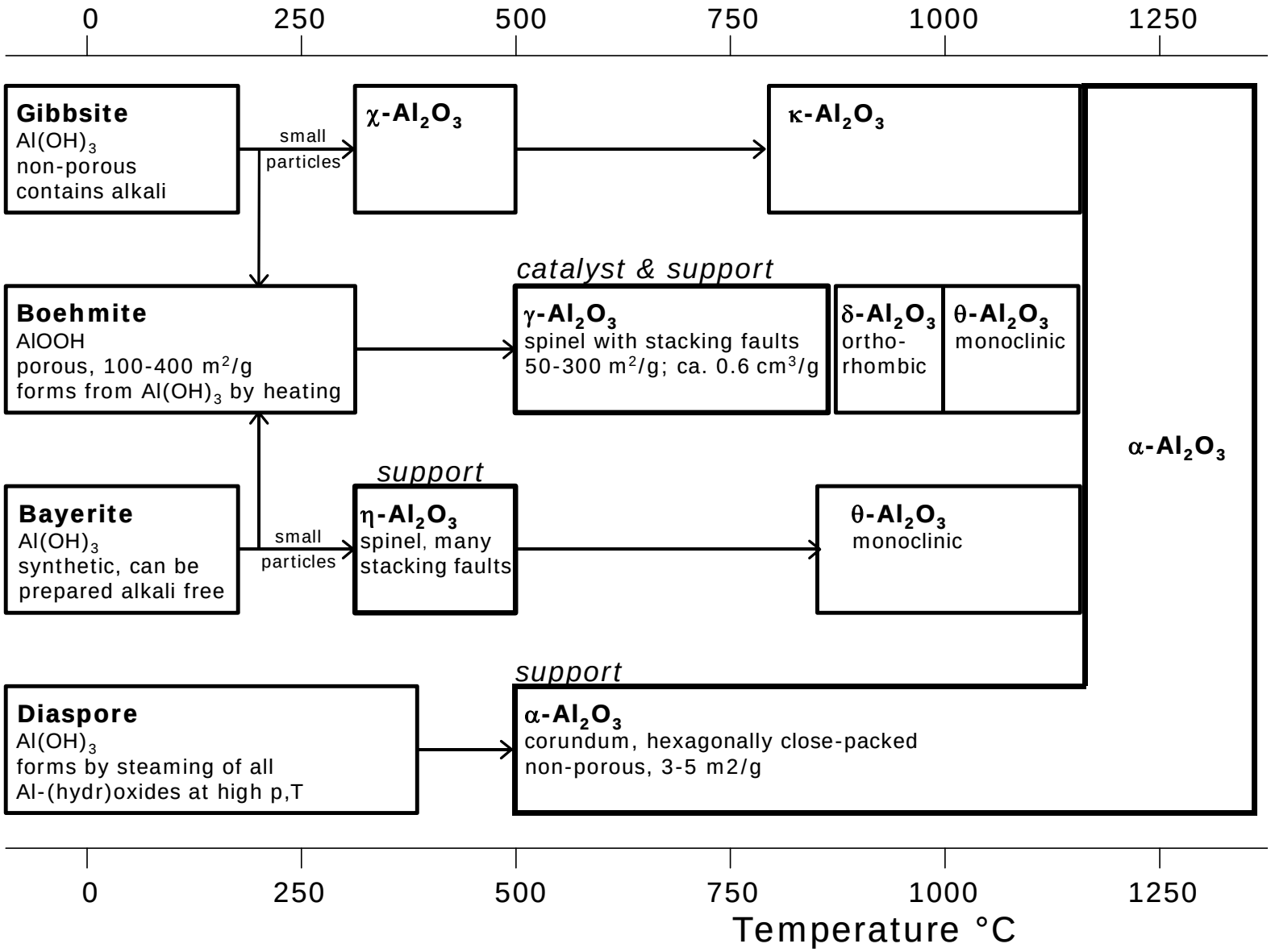

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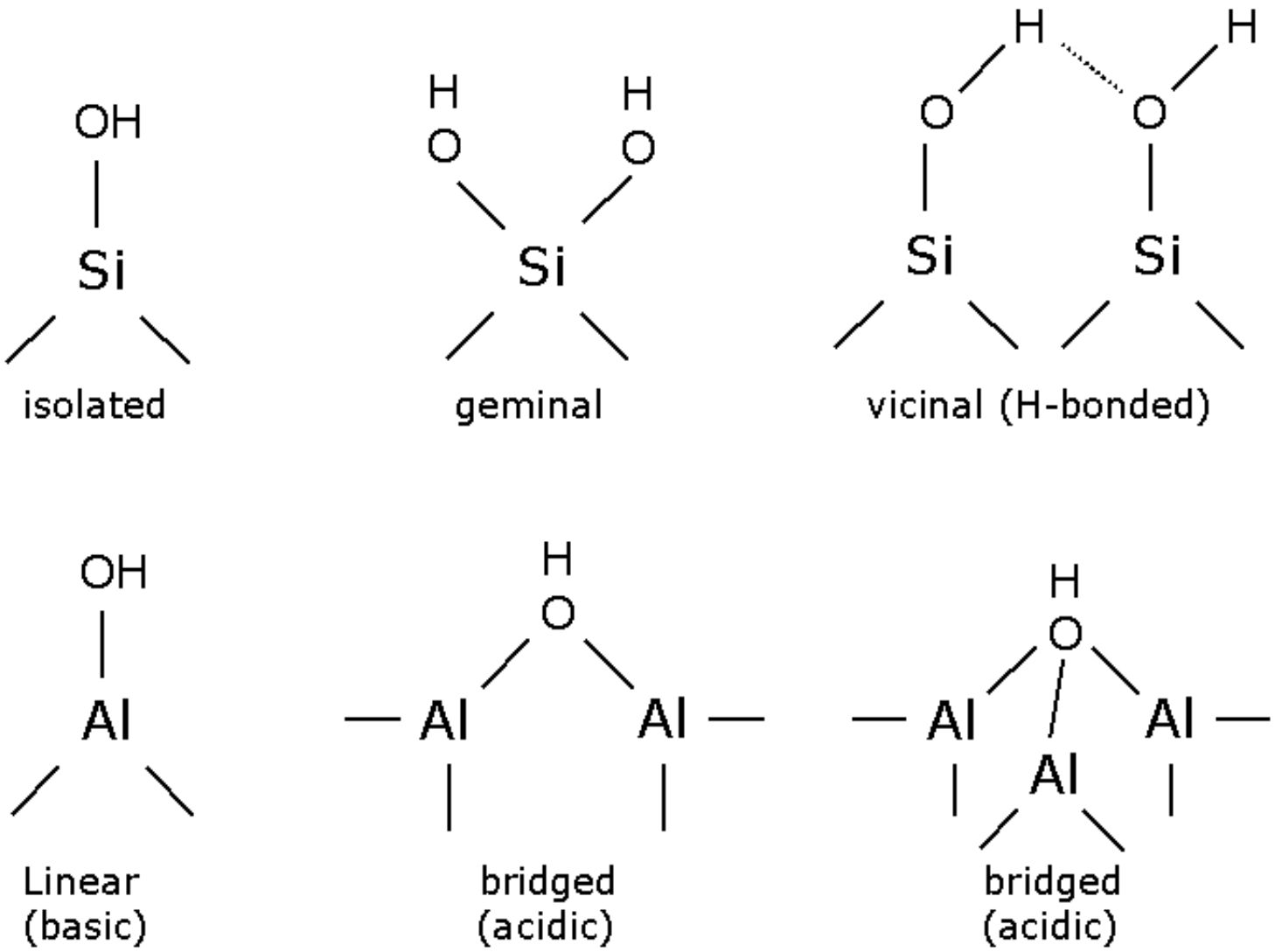

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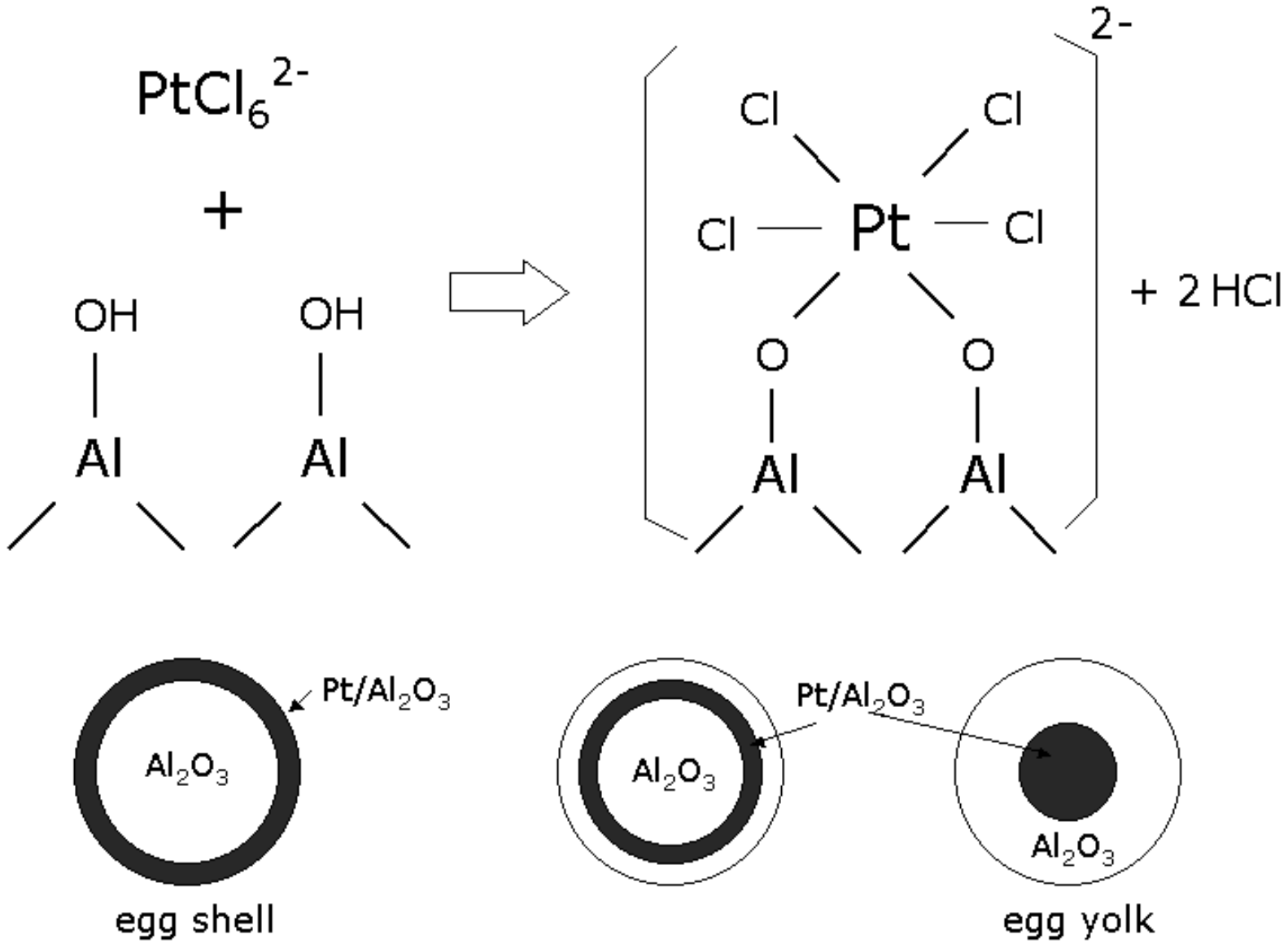

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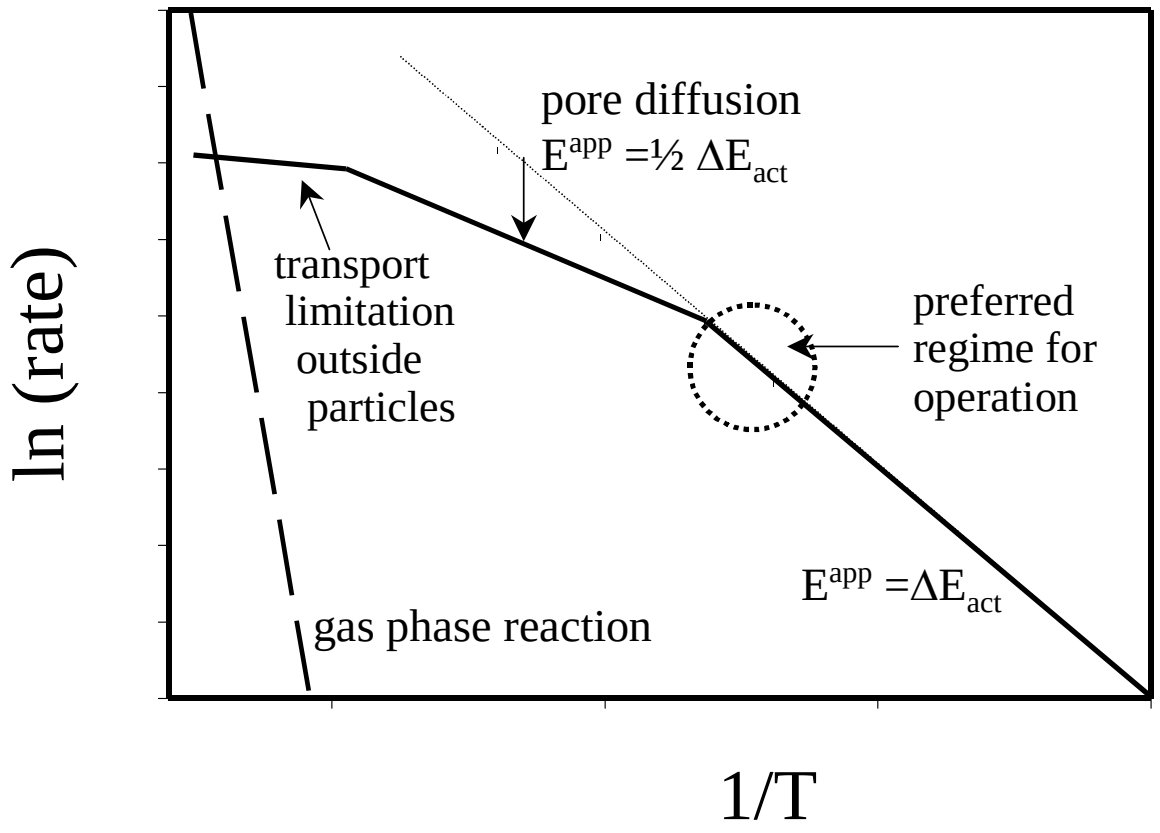

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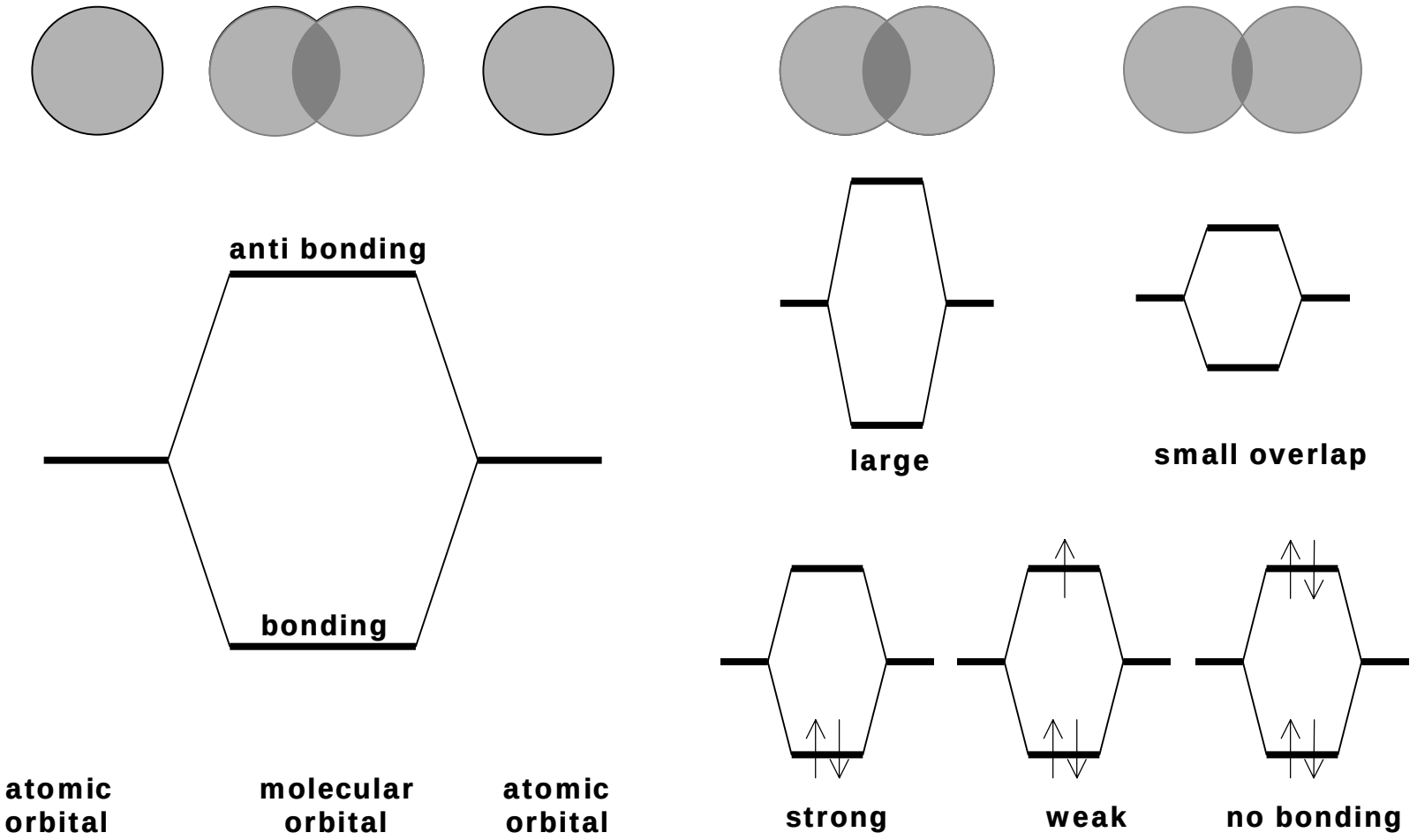

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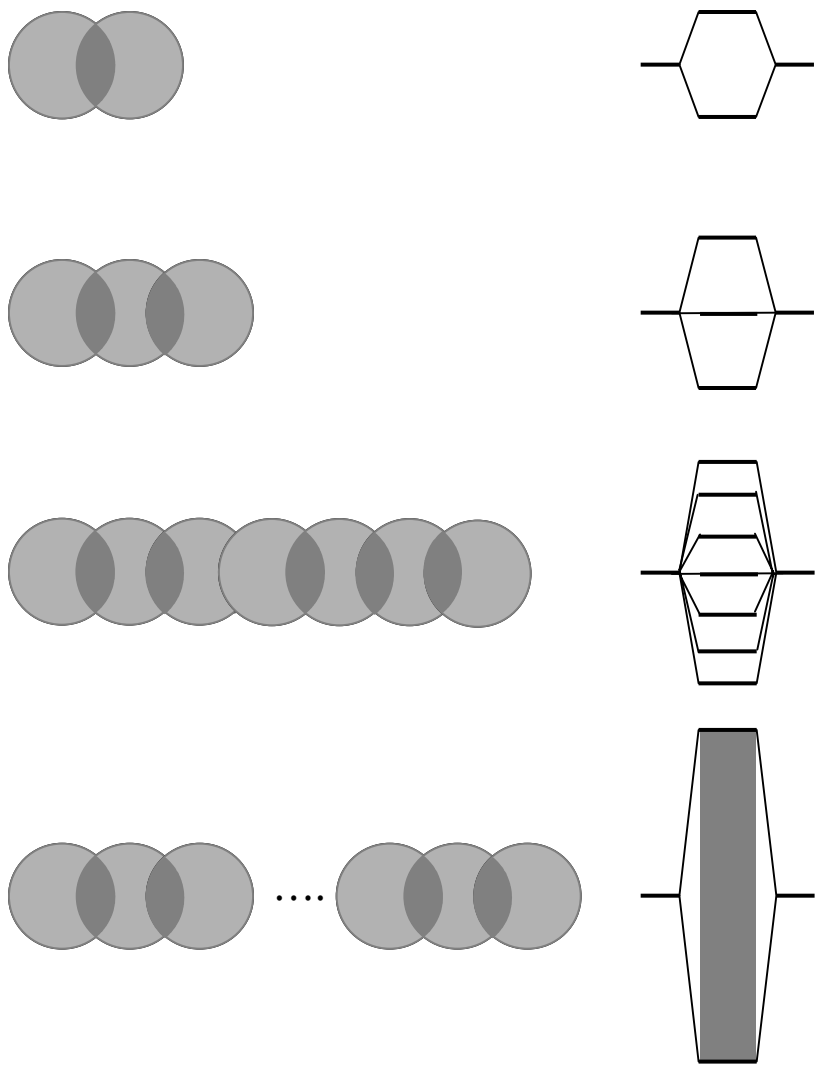

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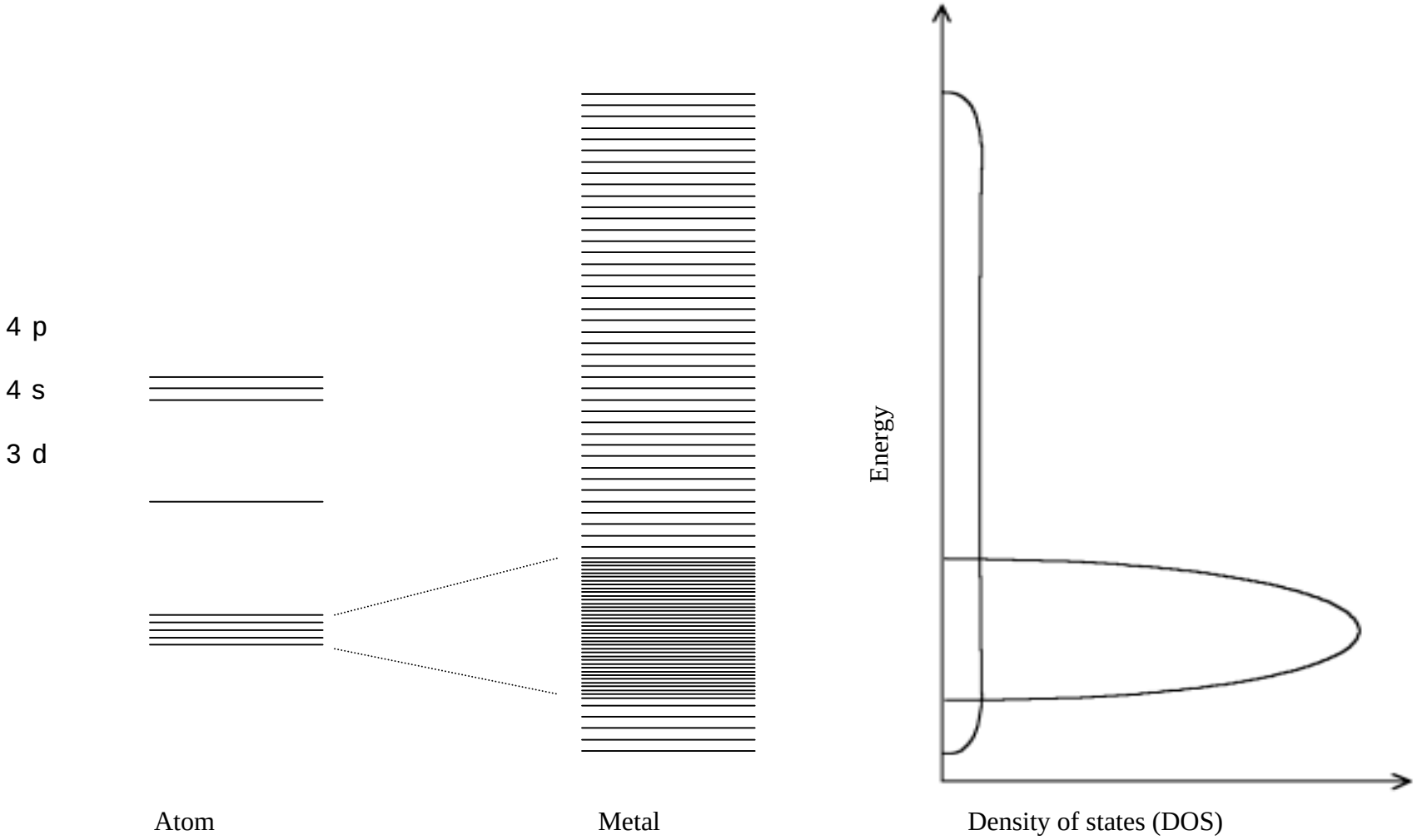

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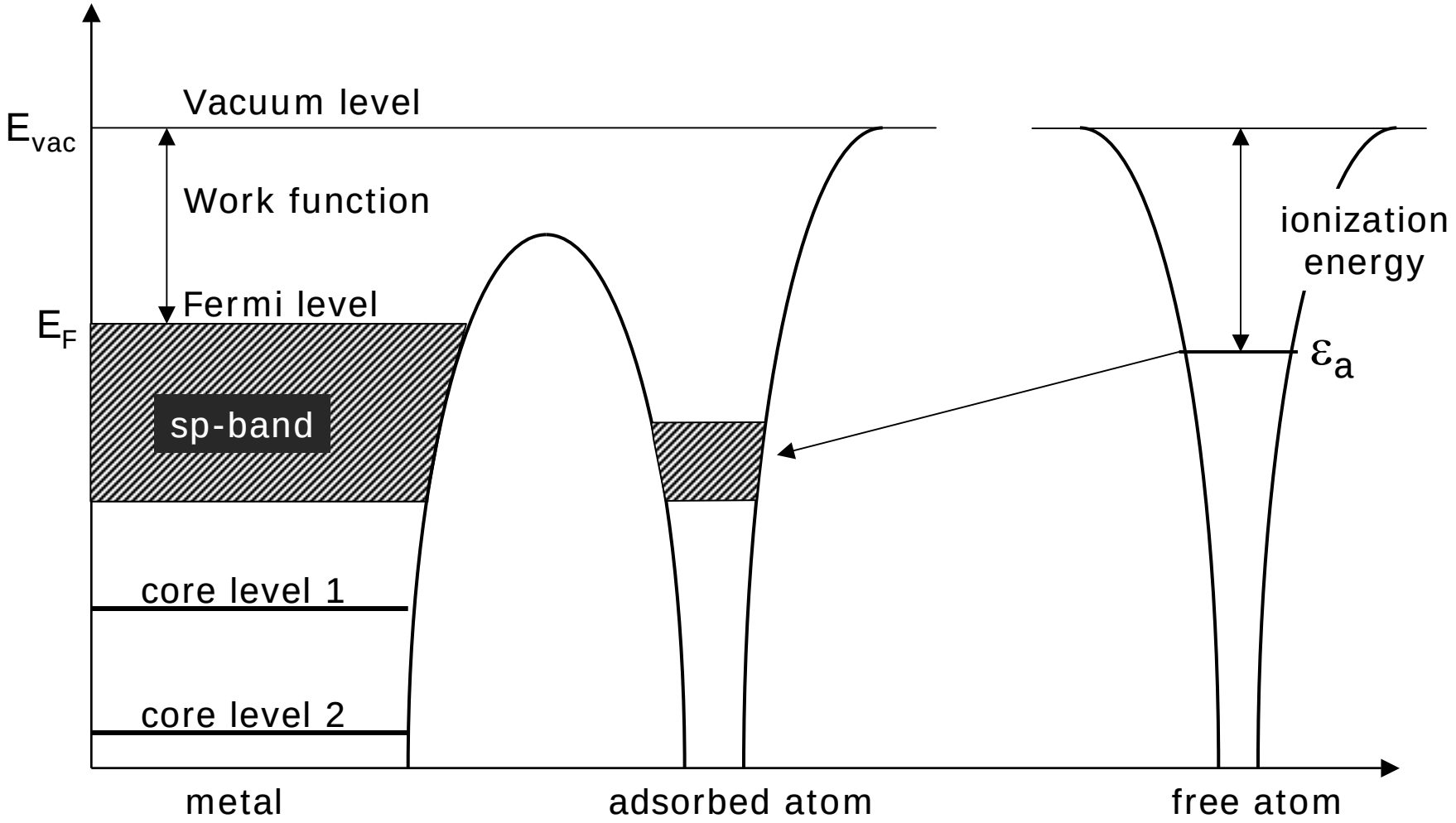

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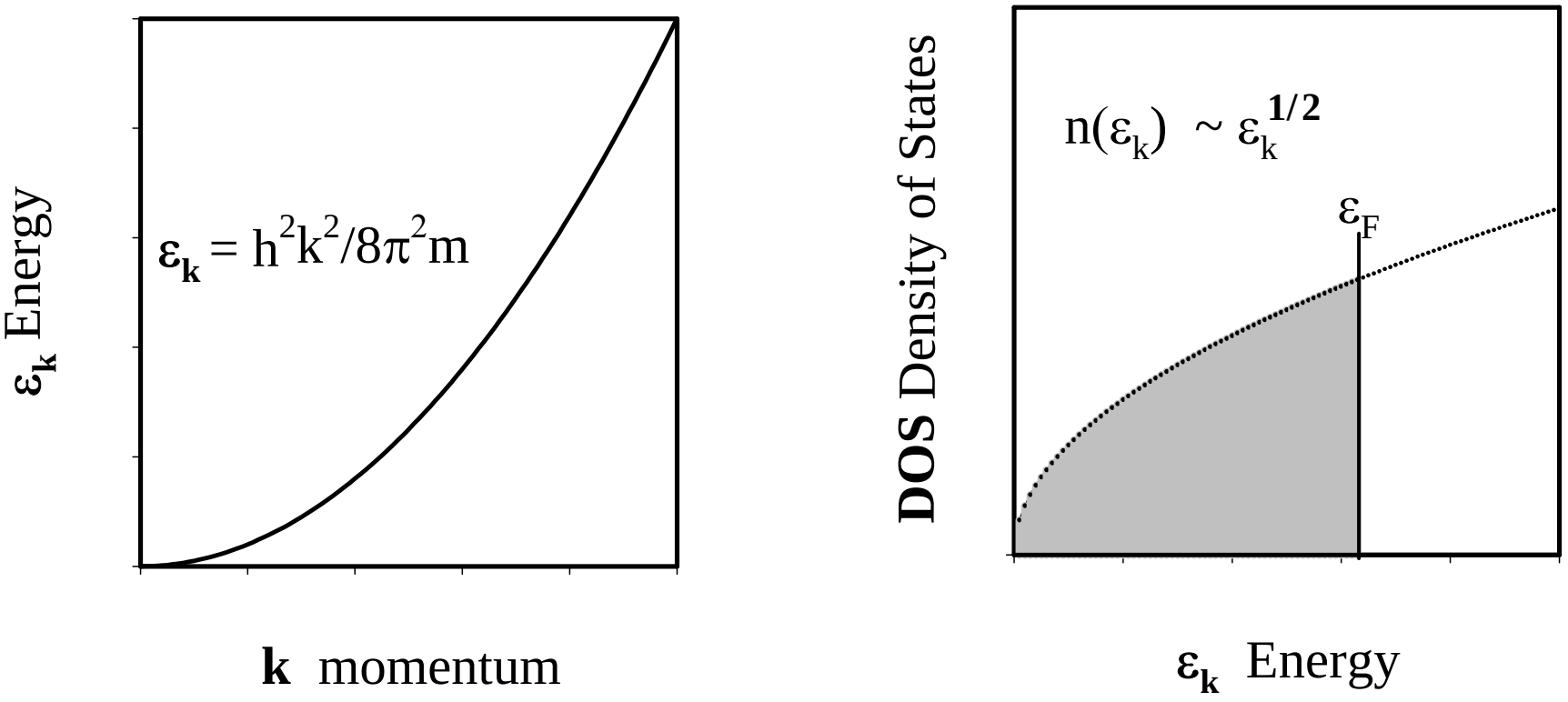

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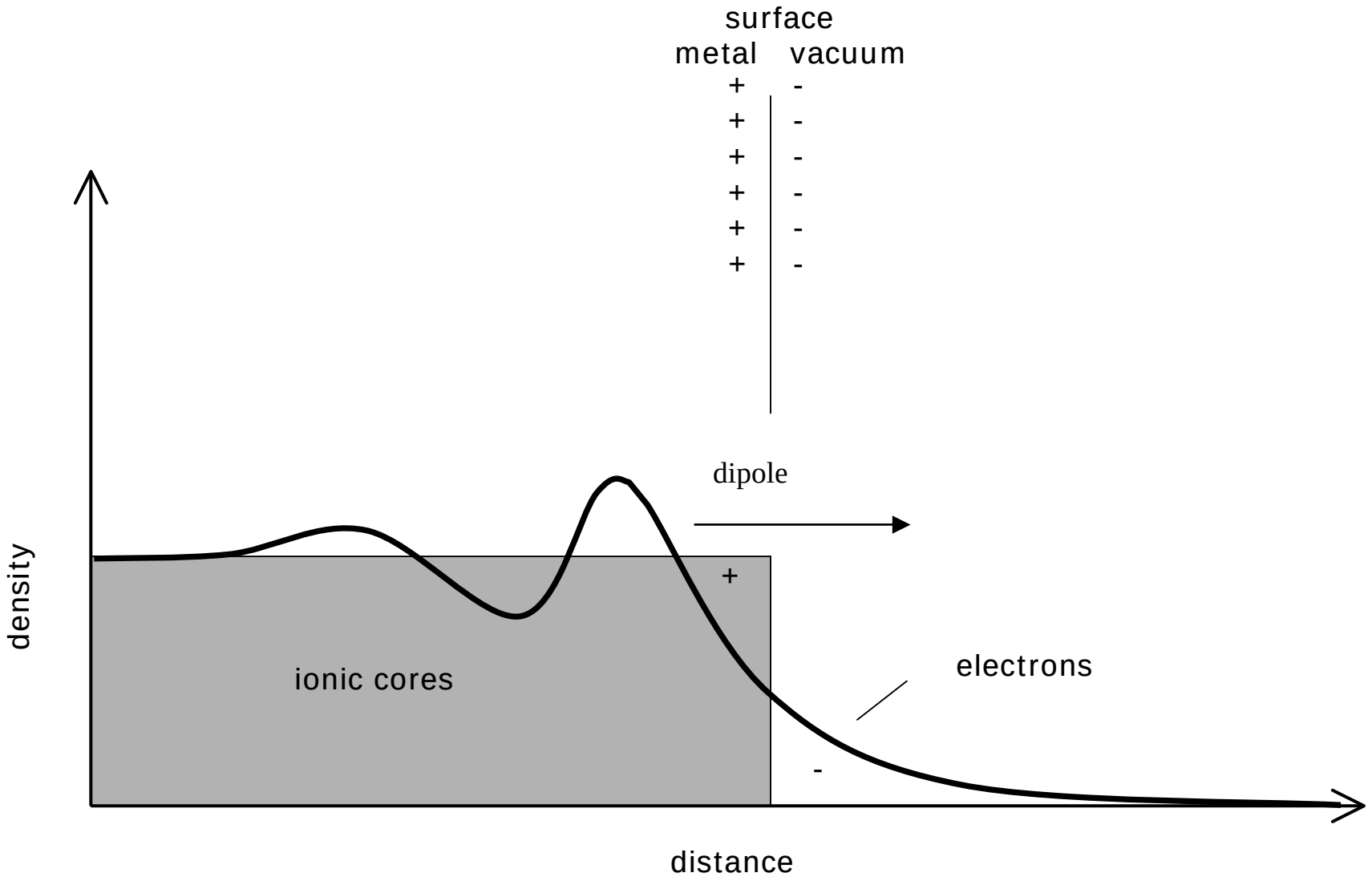

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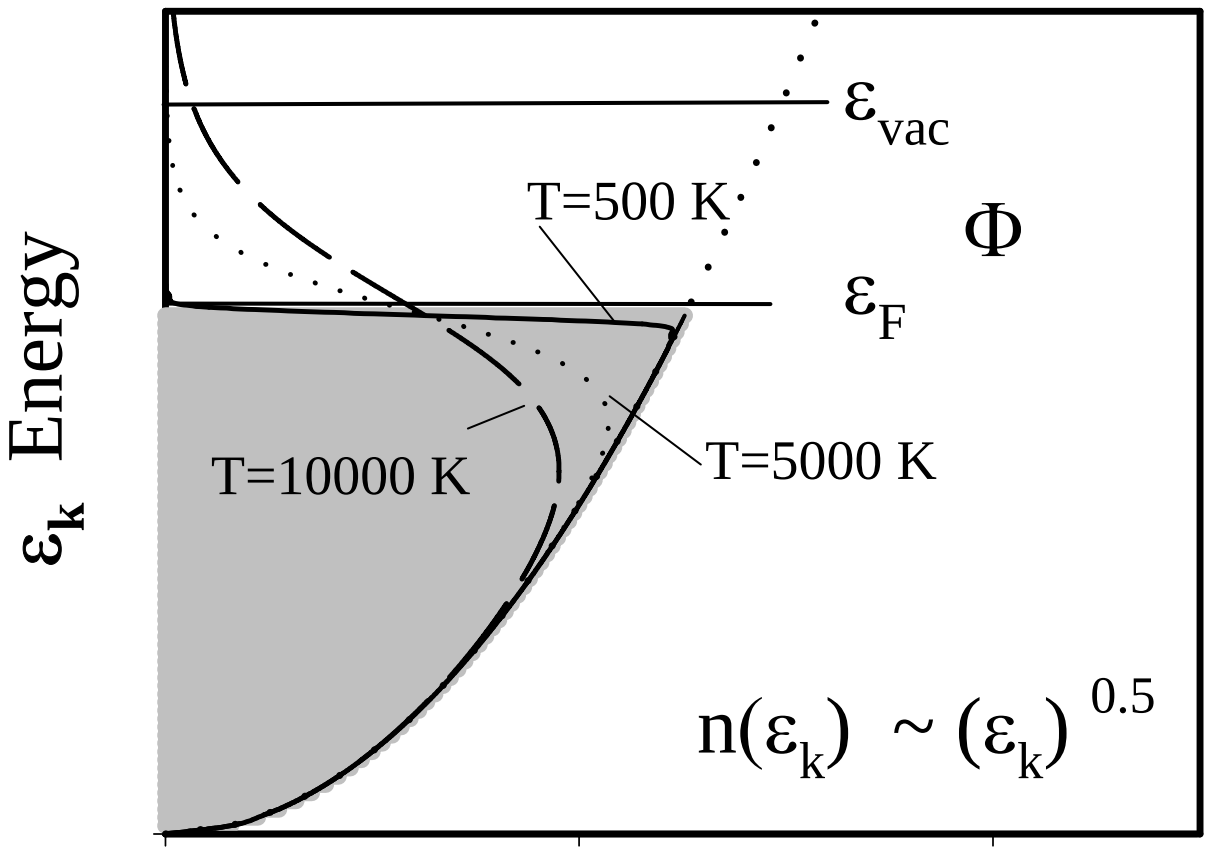
Figure 6.13



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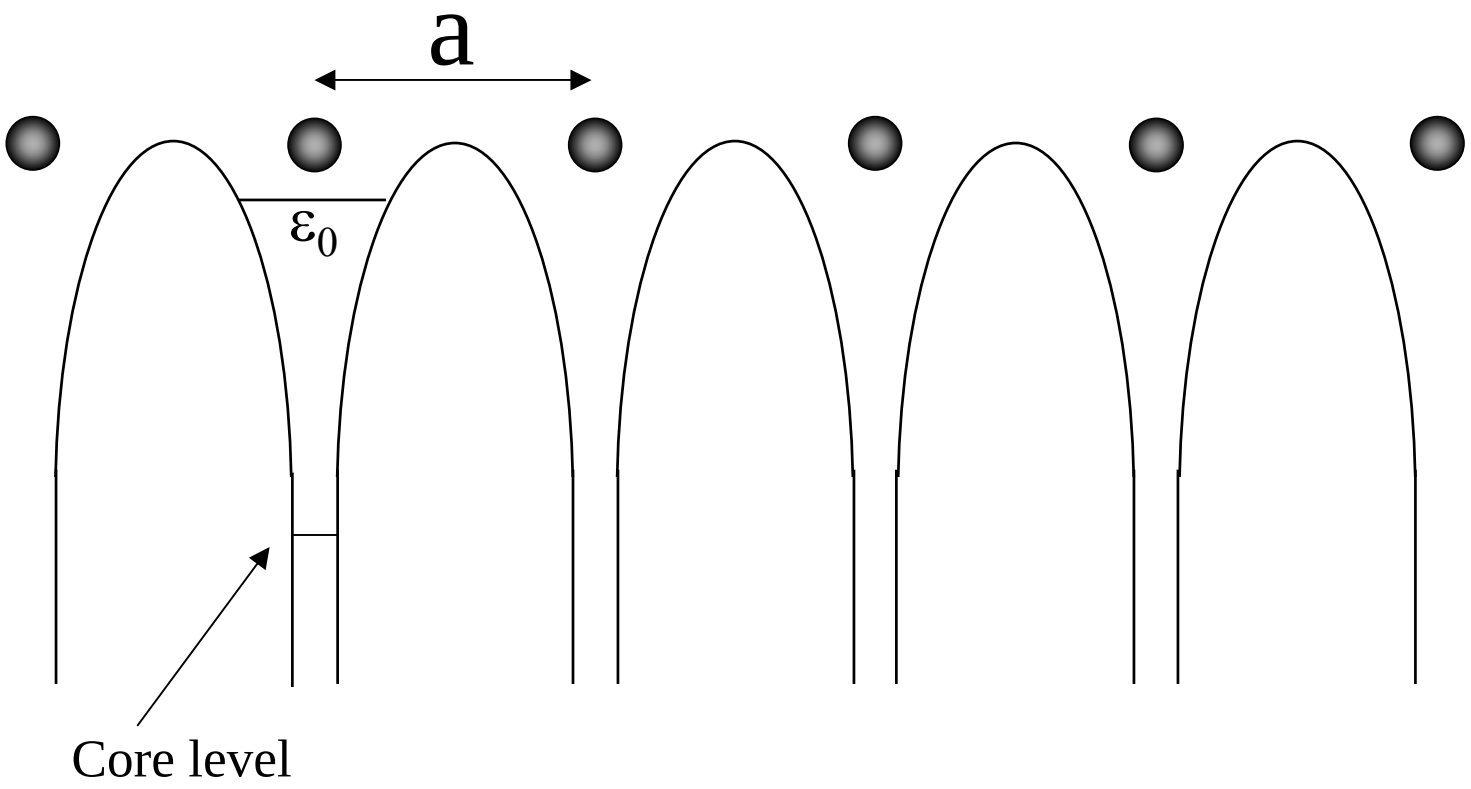

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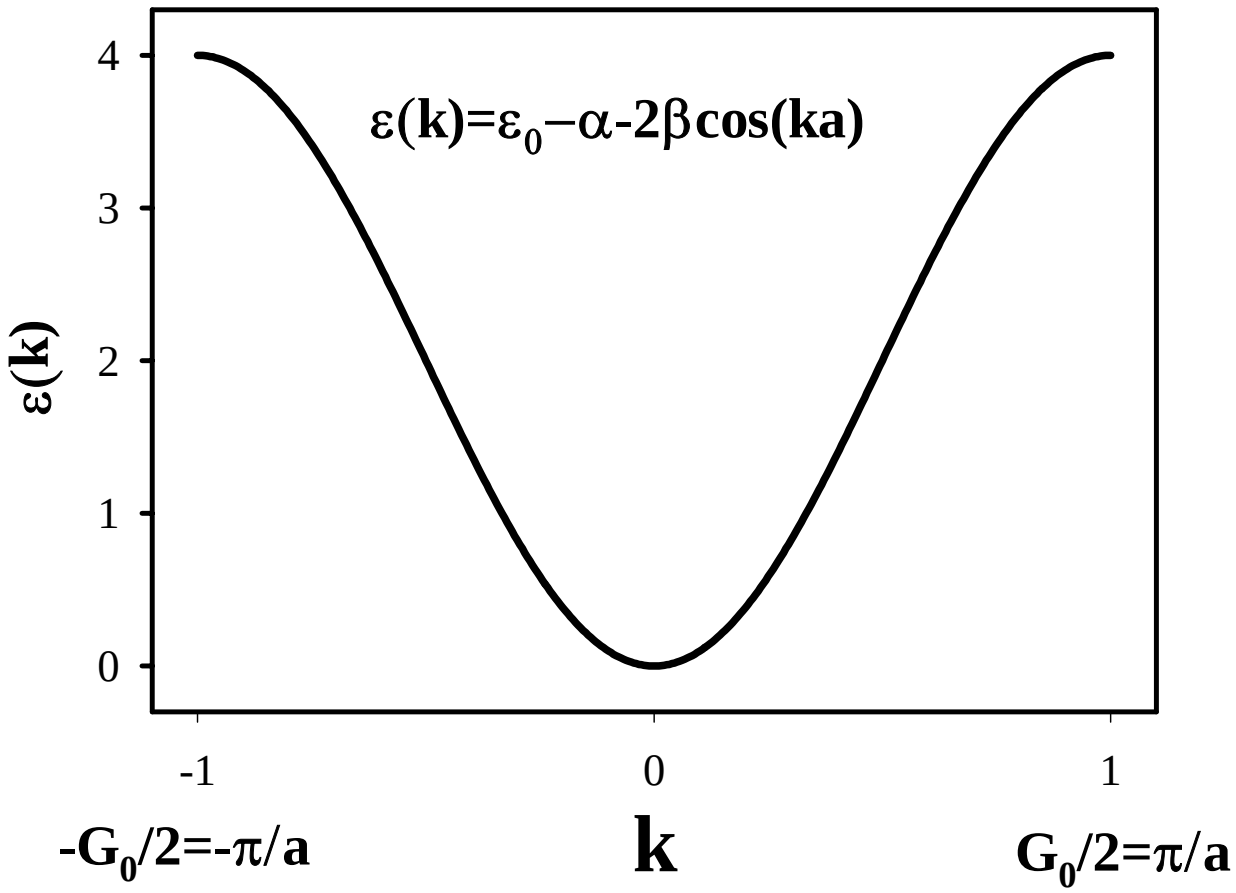

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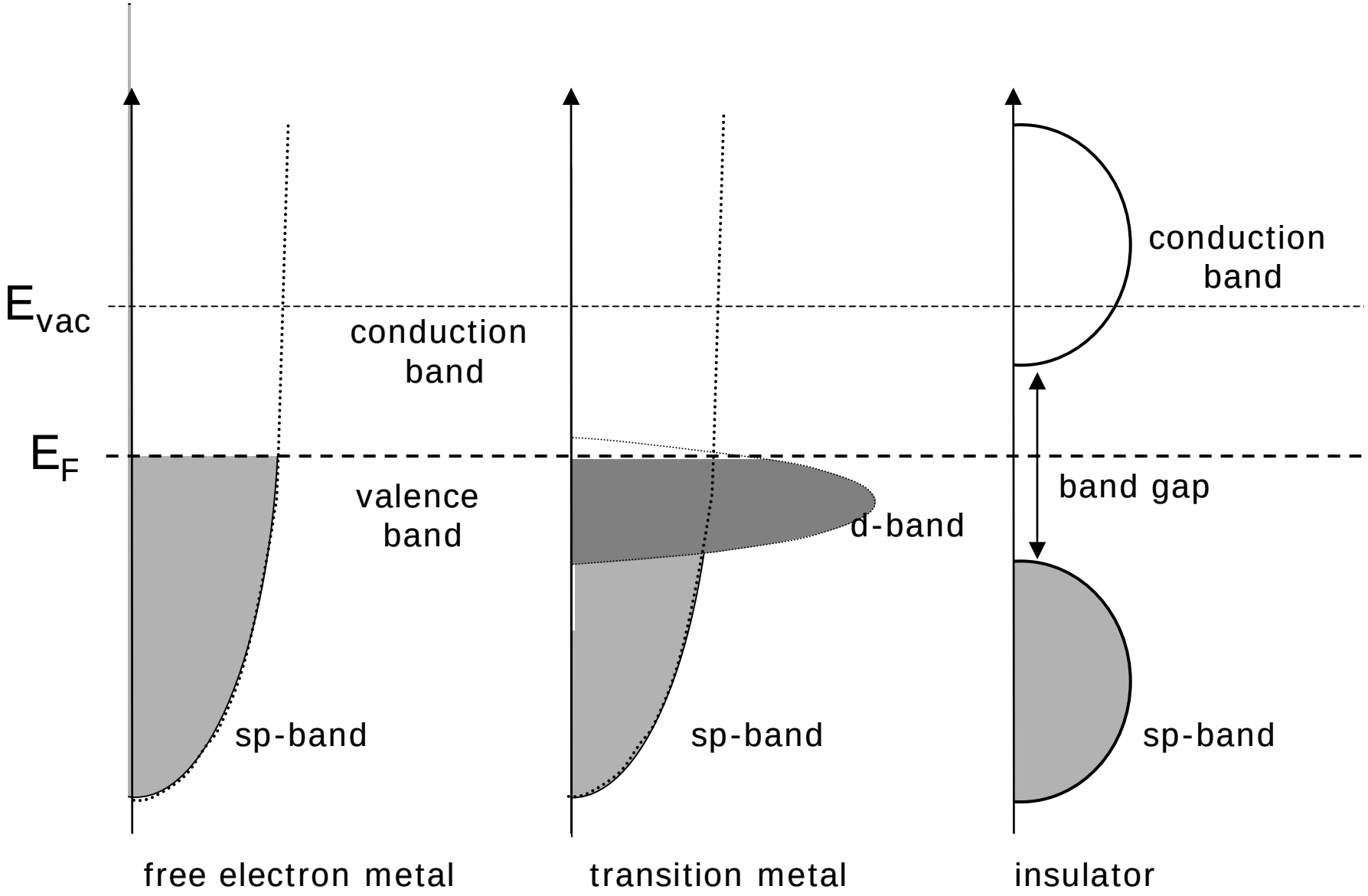

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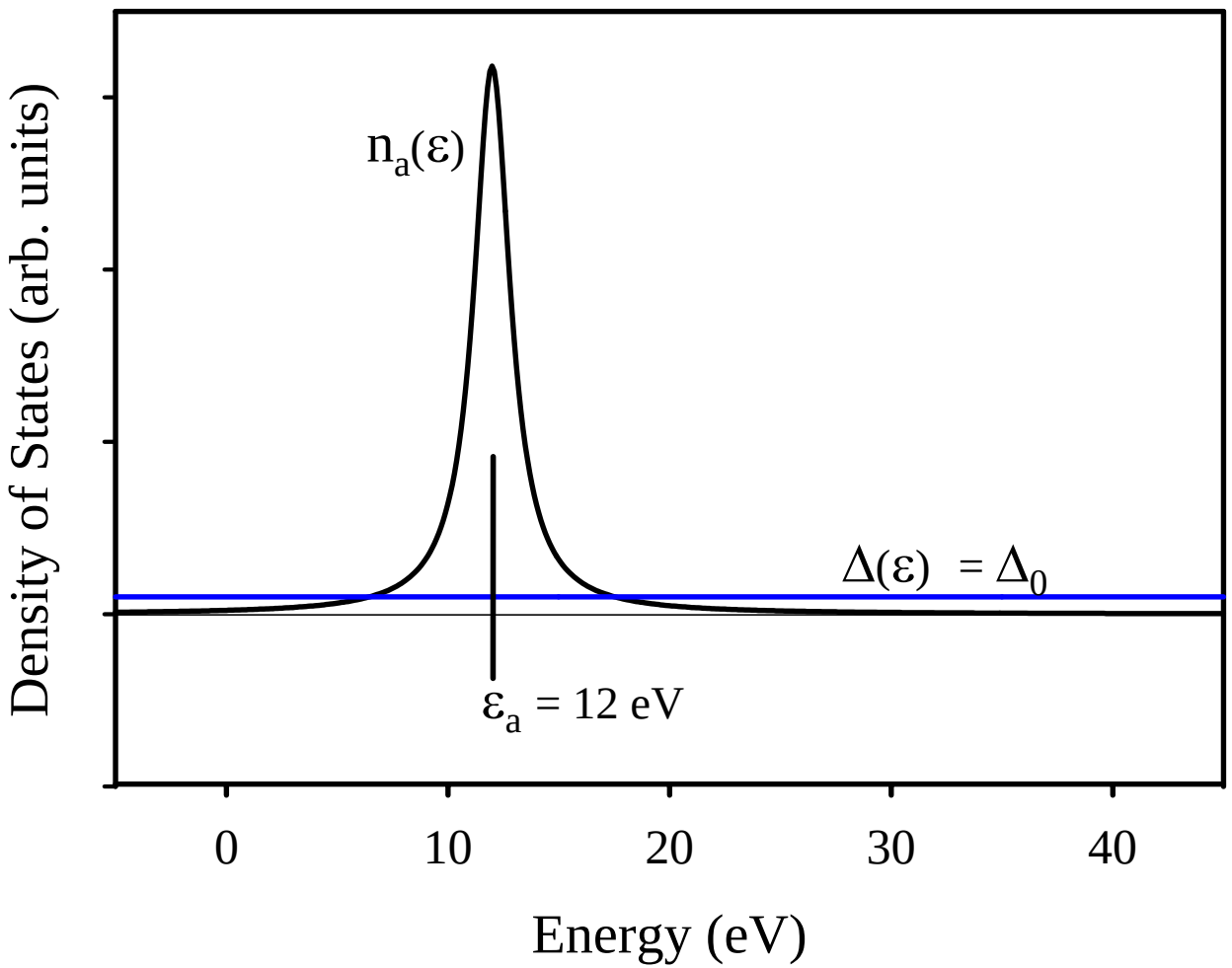

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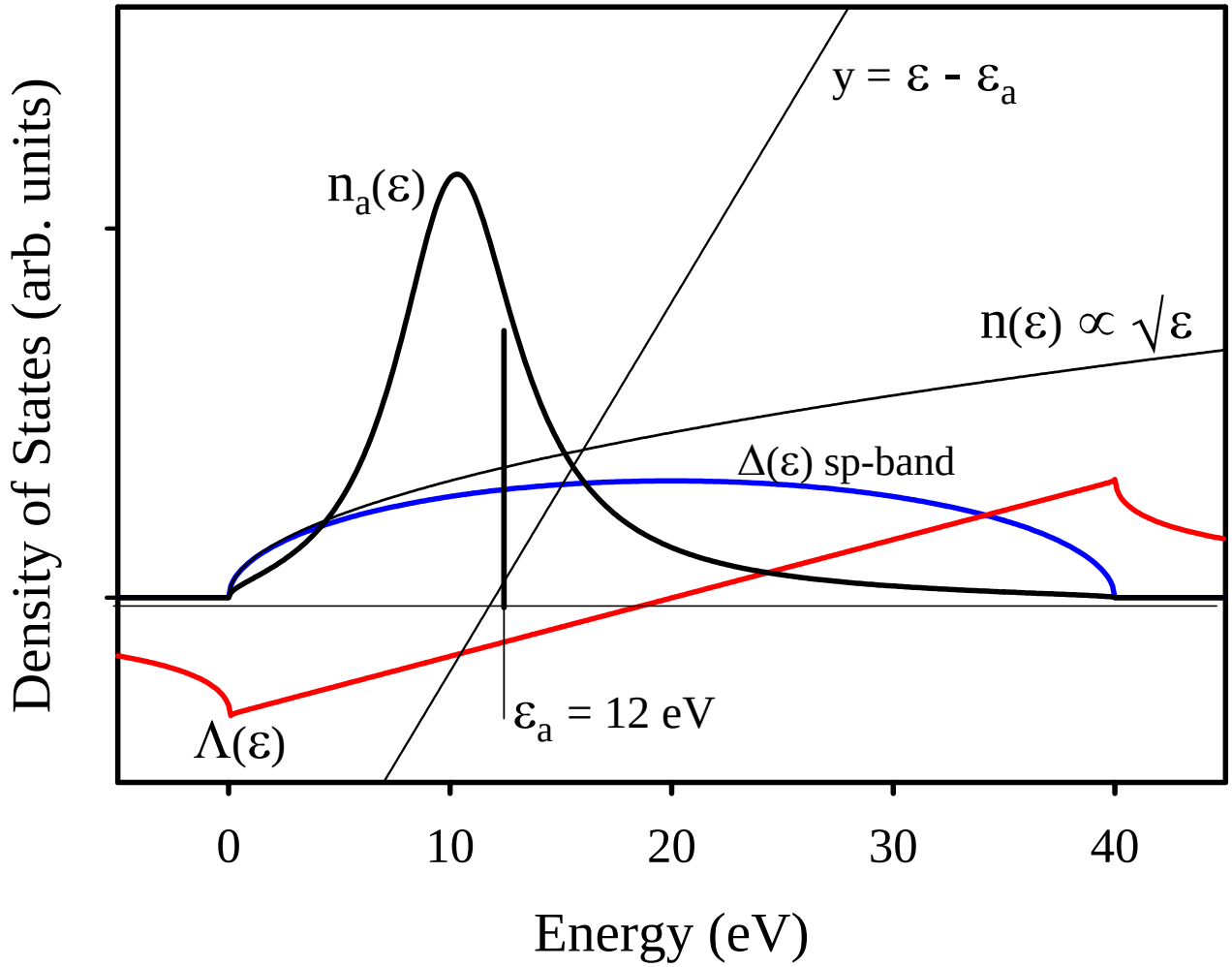

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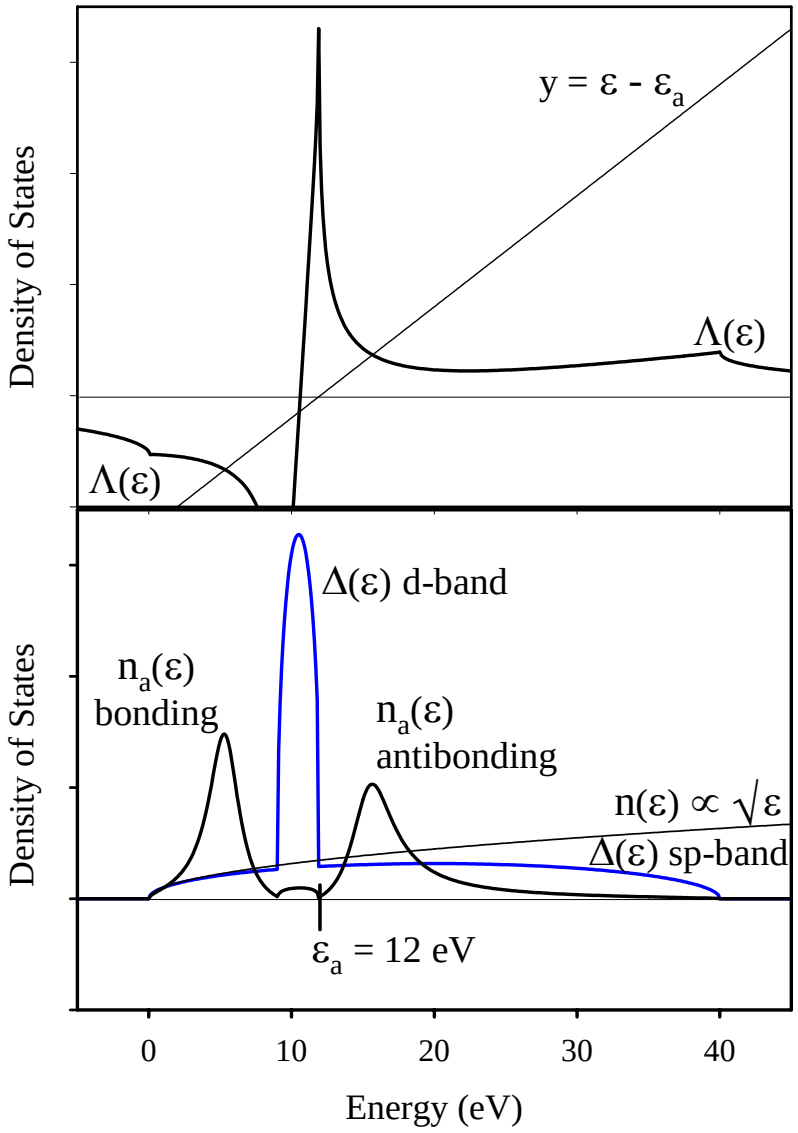

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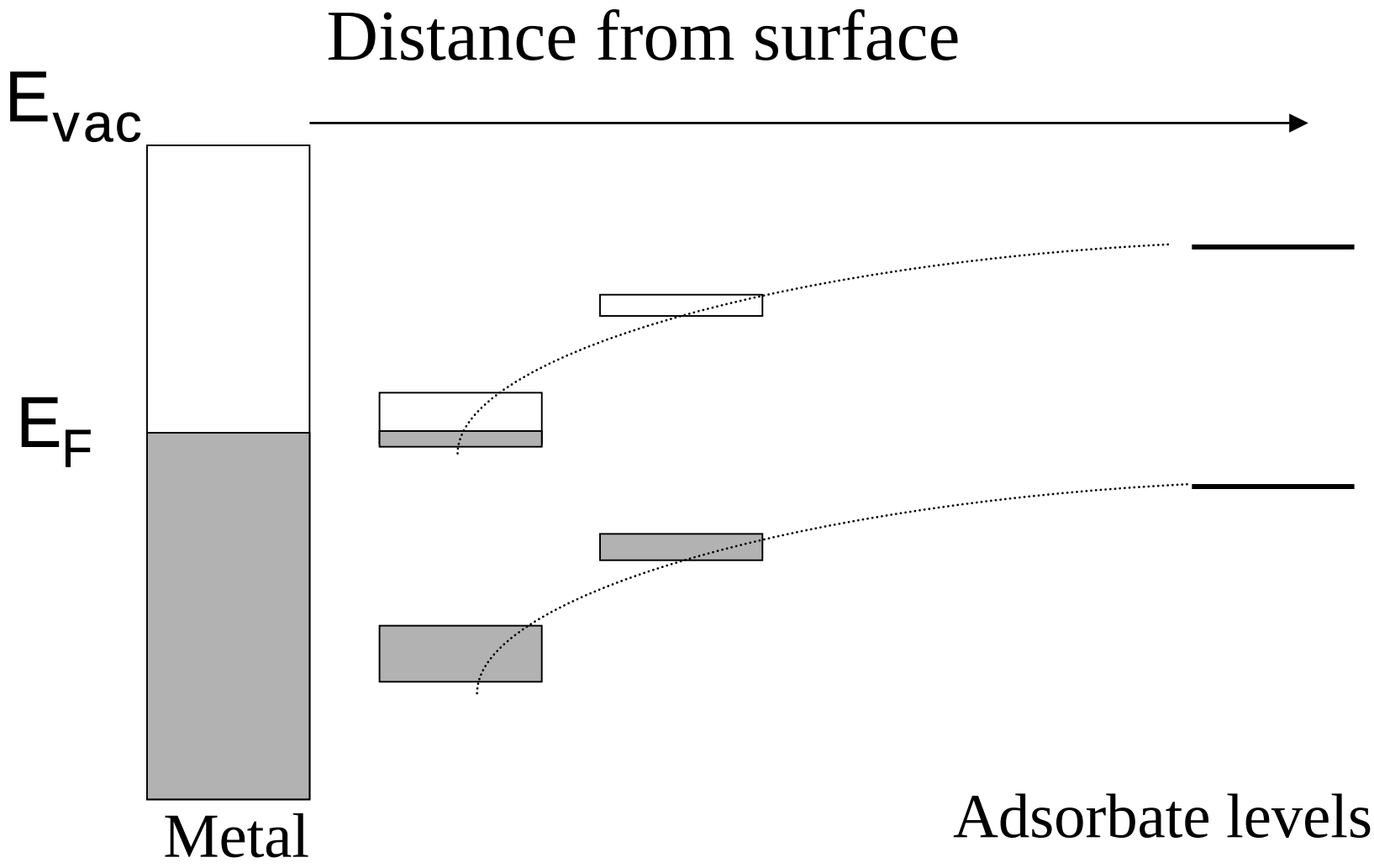

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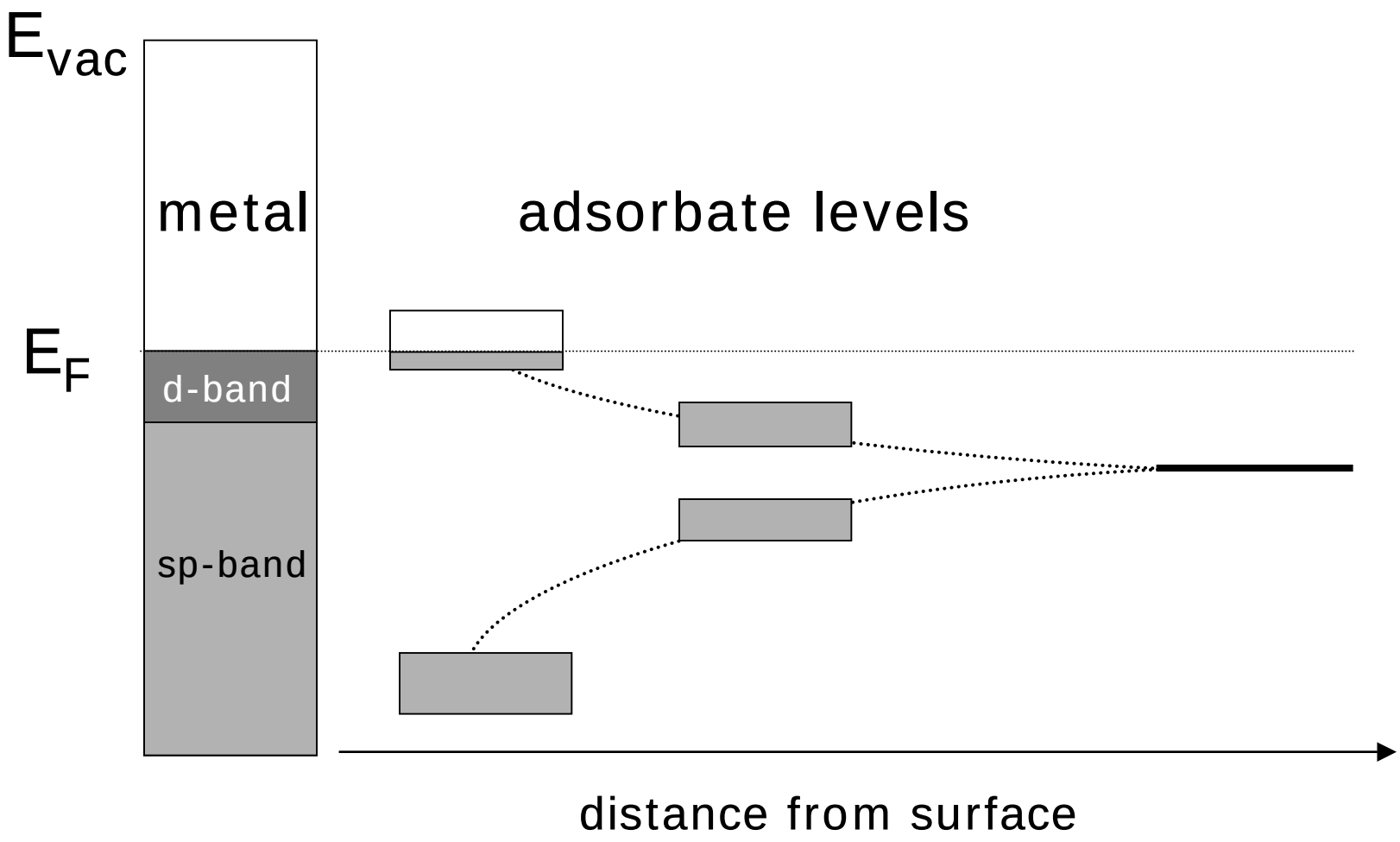

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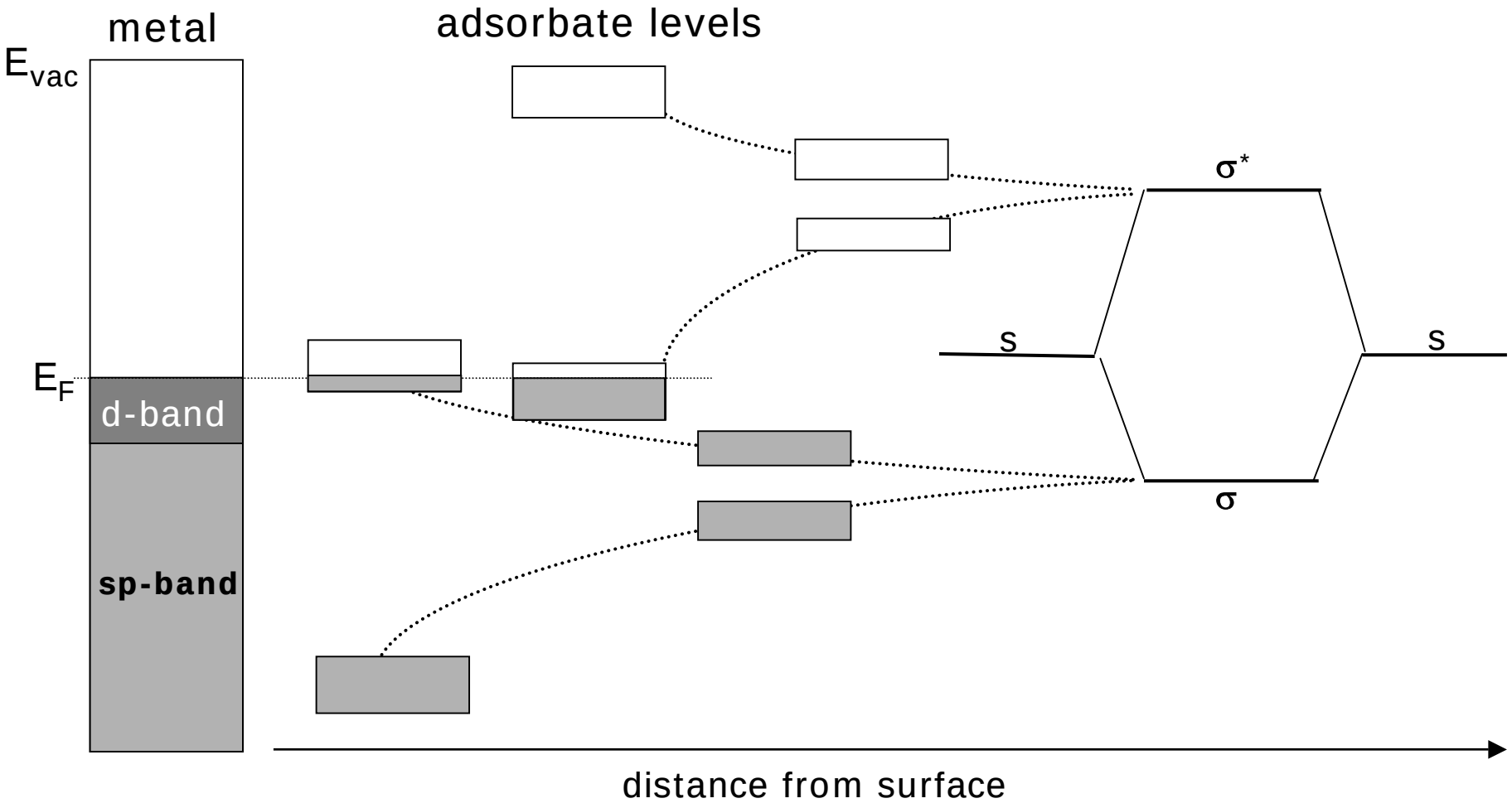

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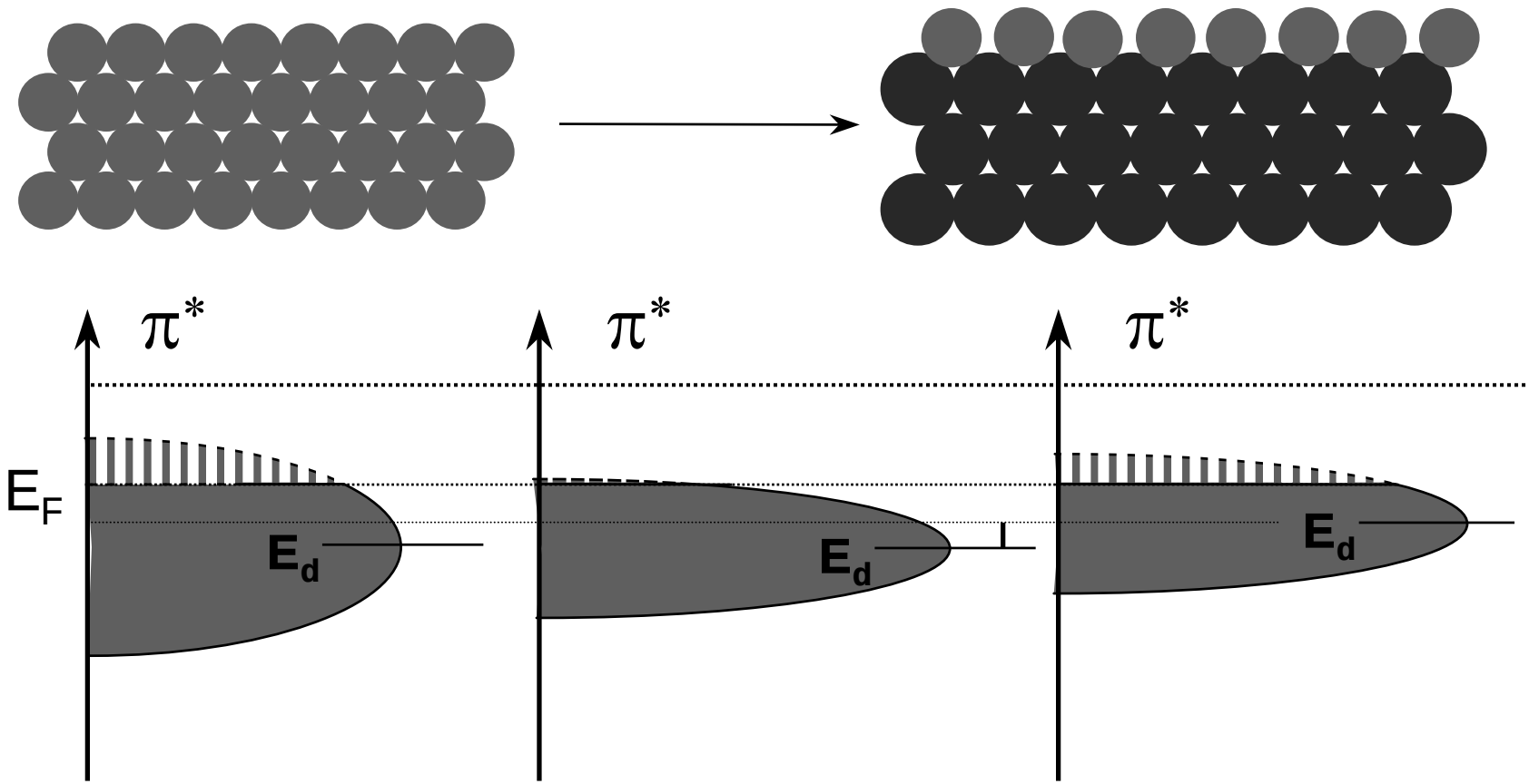

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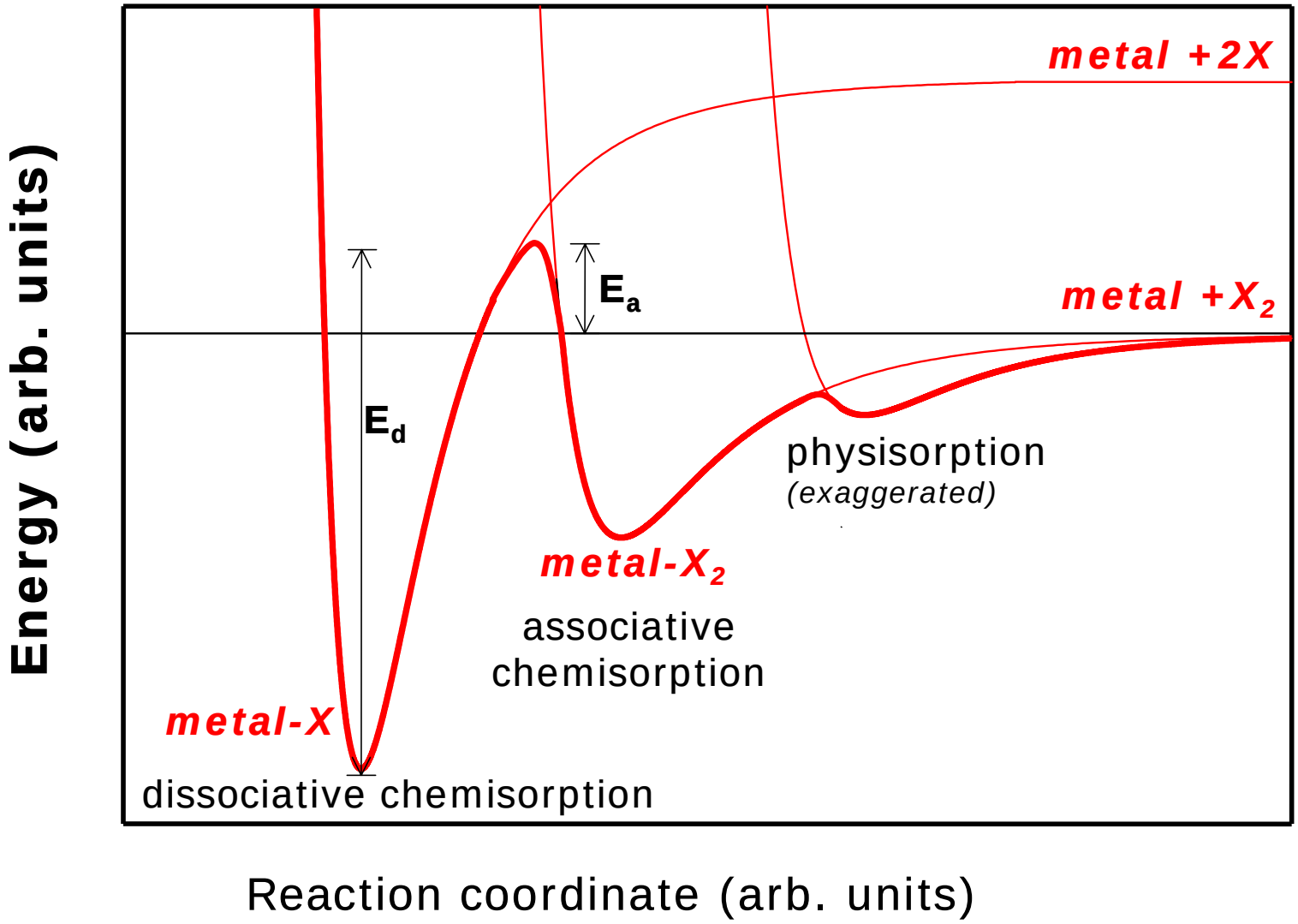

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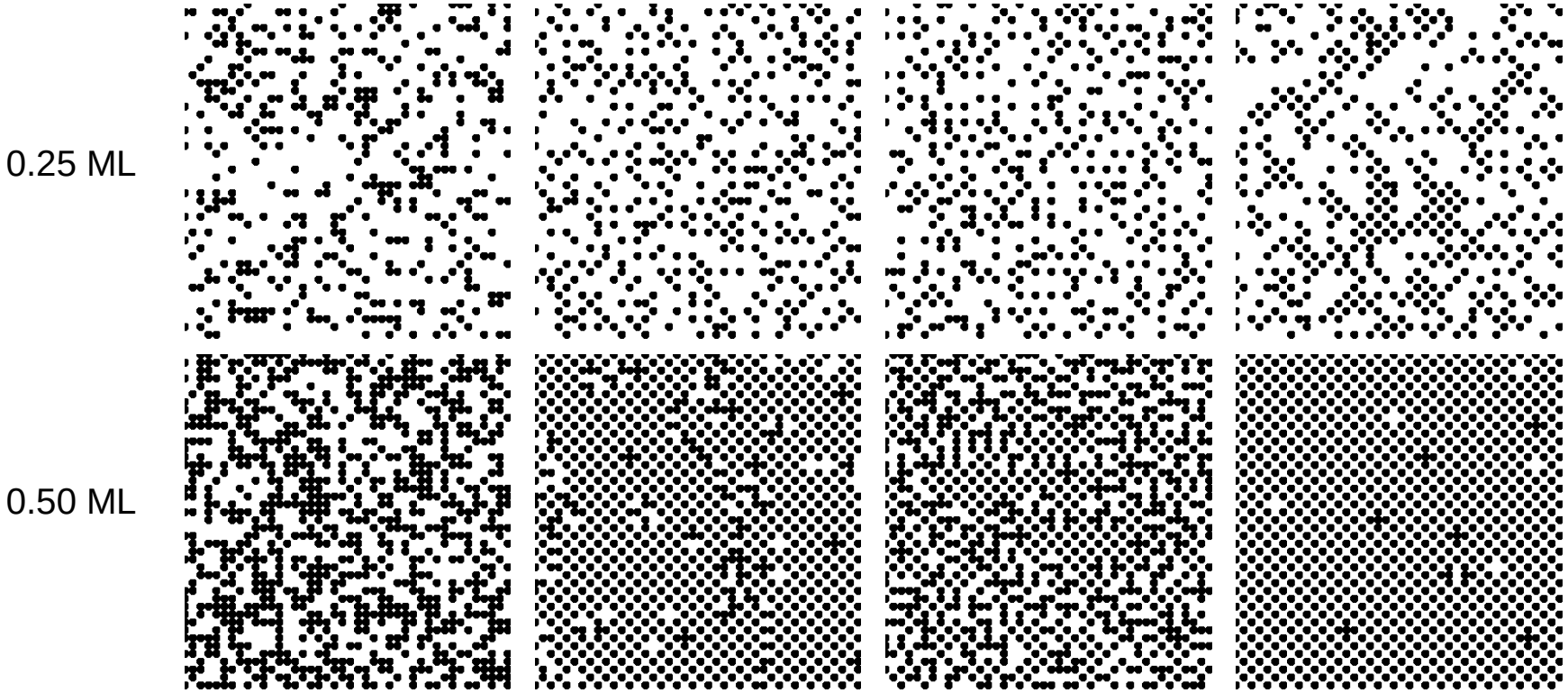

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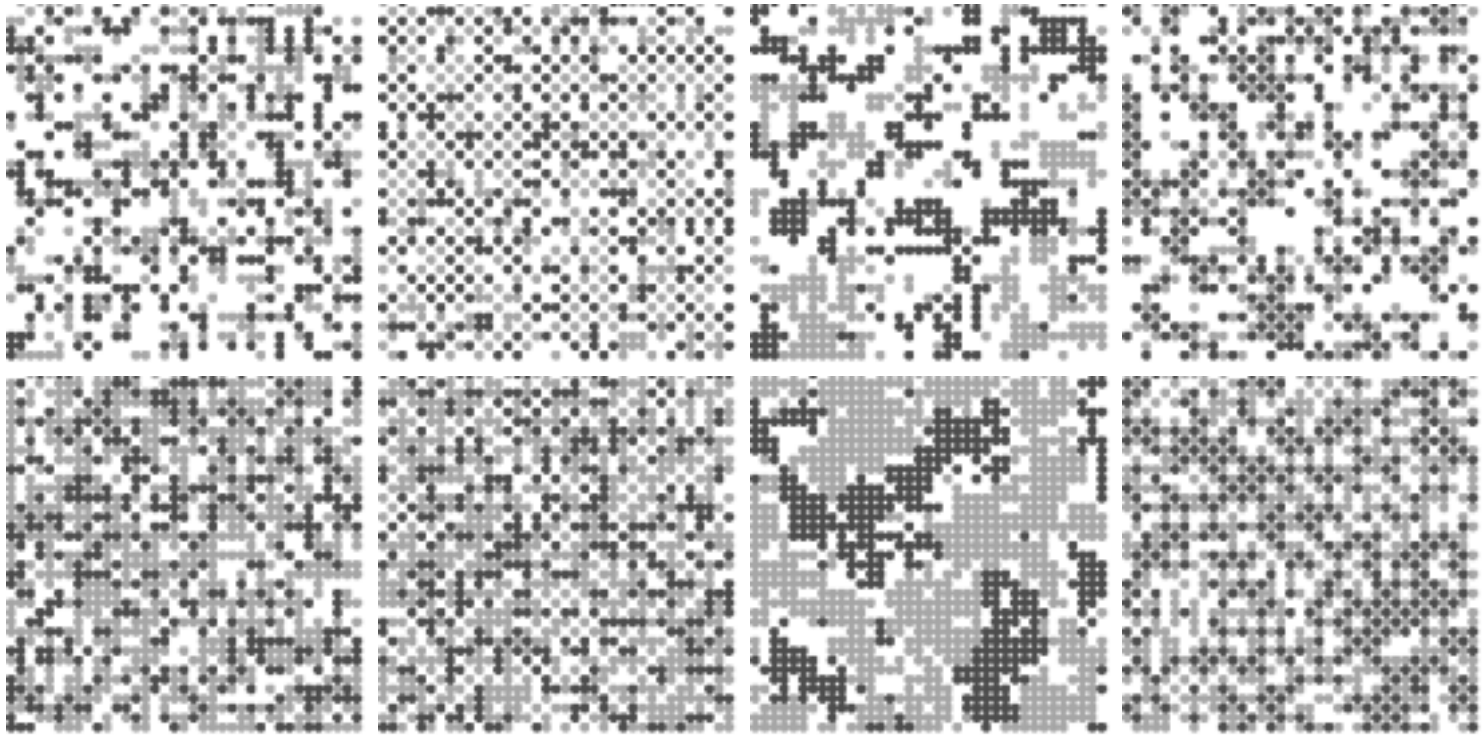

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$\omega^{NN}_{B\text{-}B}$	=	0	5	-5	5 kJ/mol
$\omega^{NN}_{A\text{-}B}$	=	0	5	5	-5 kJ/mol

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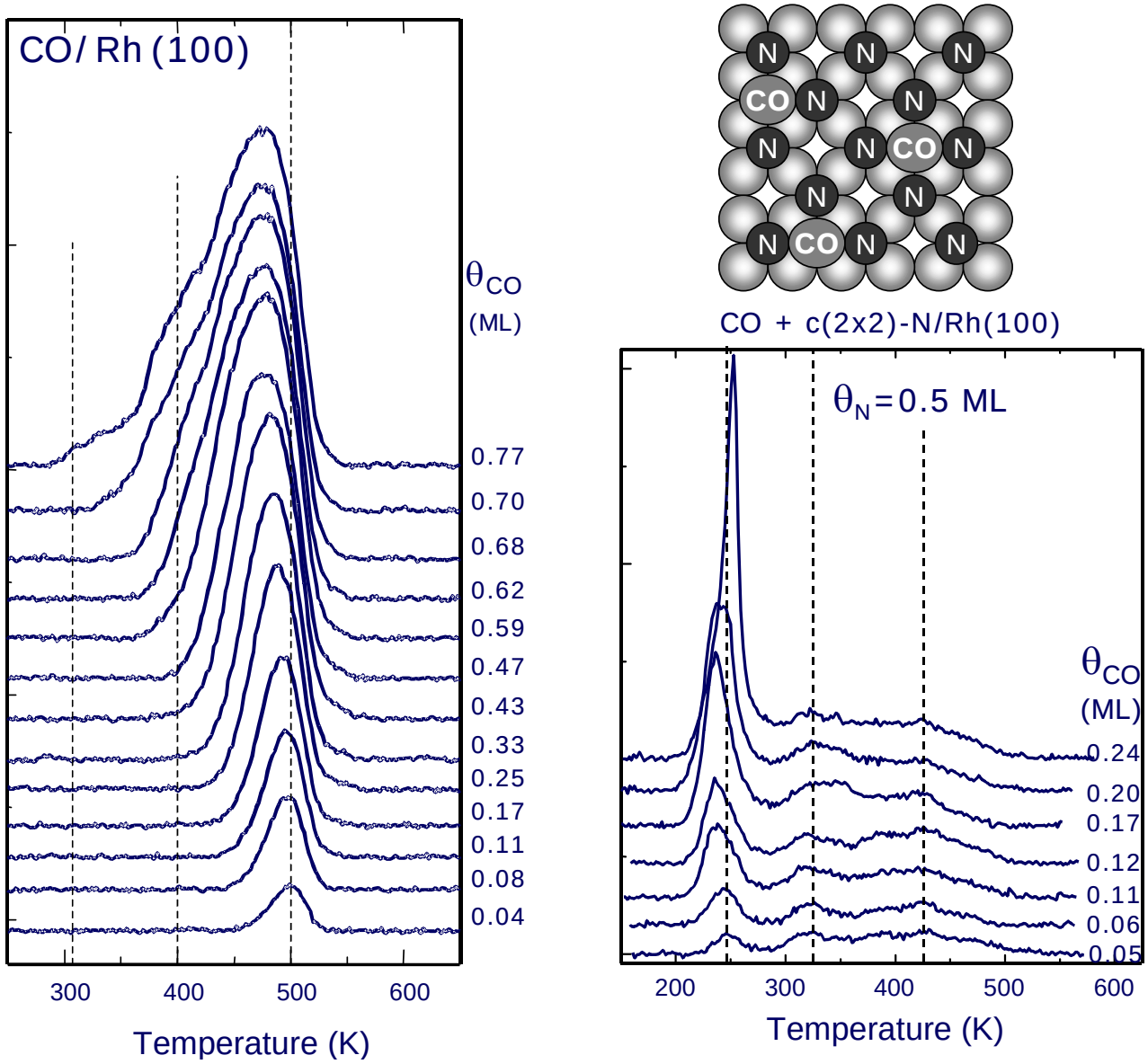

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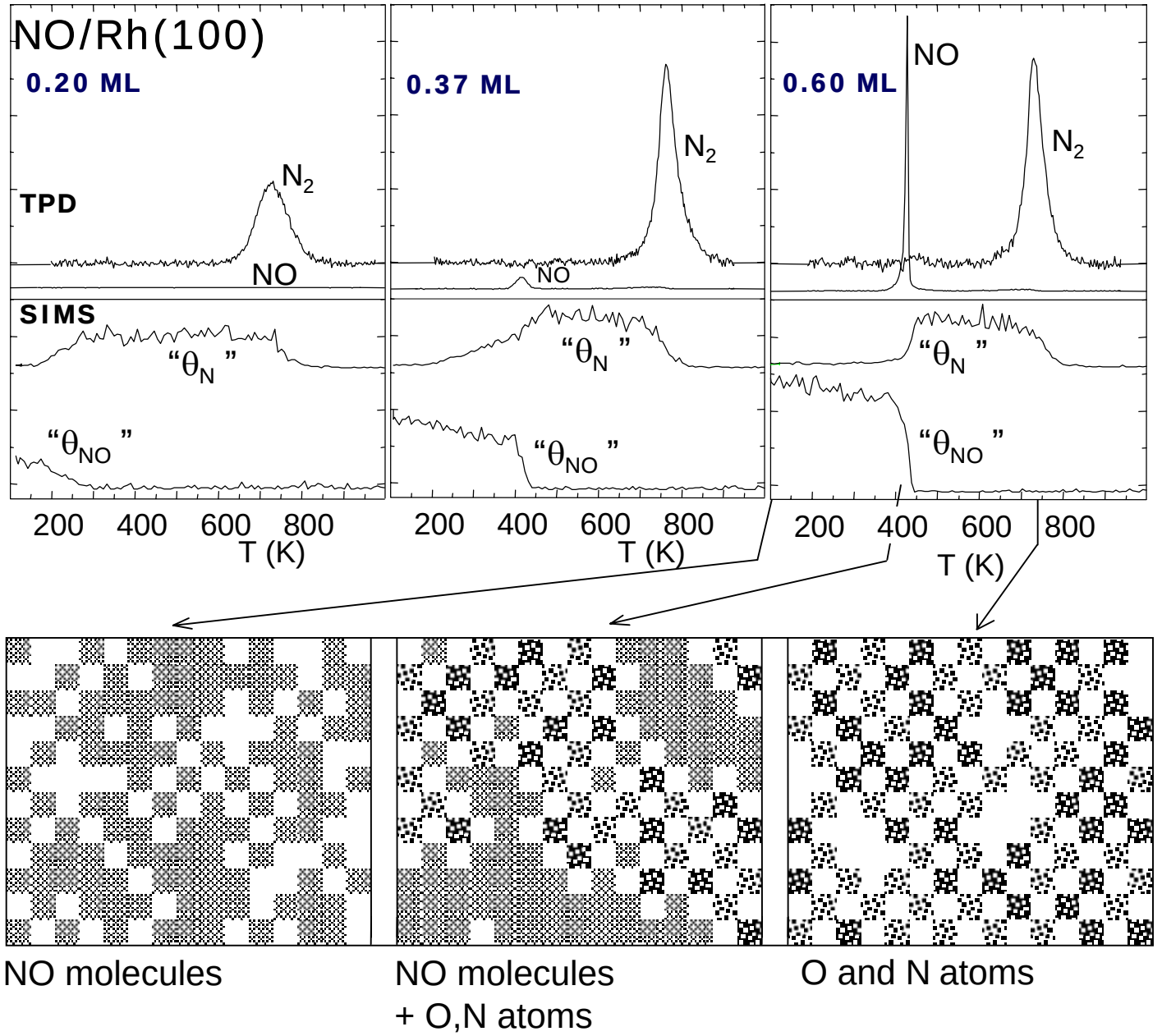

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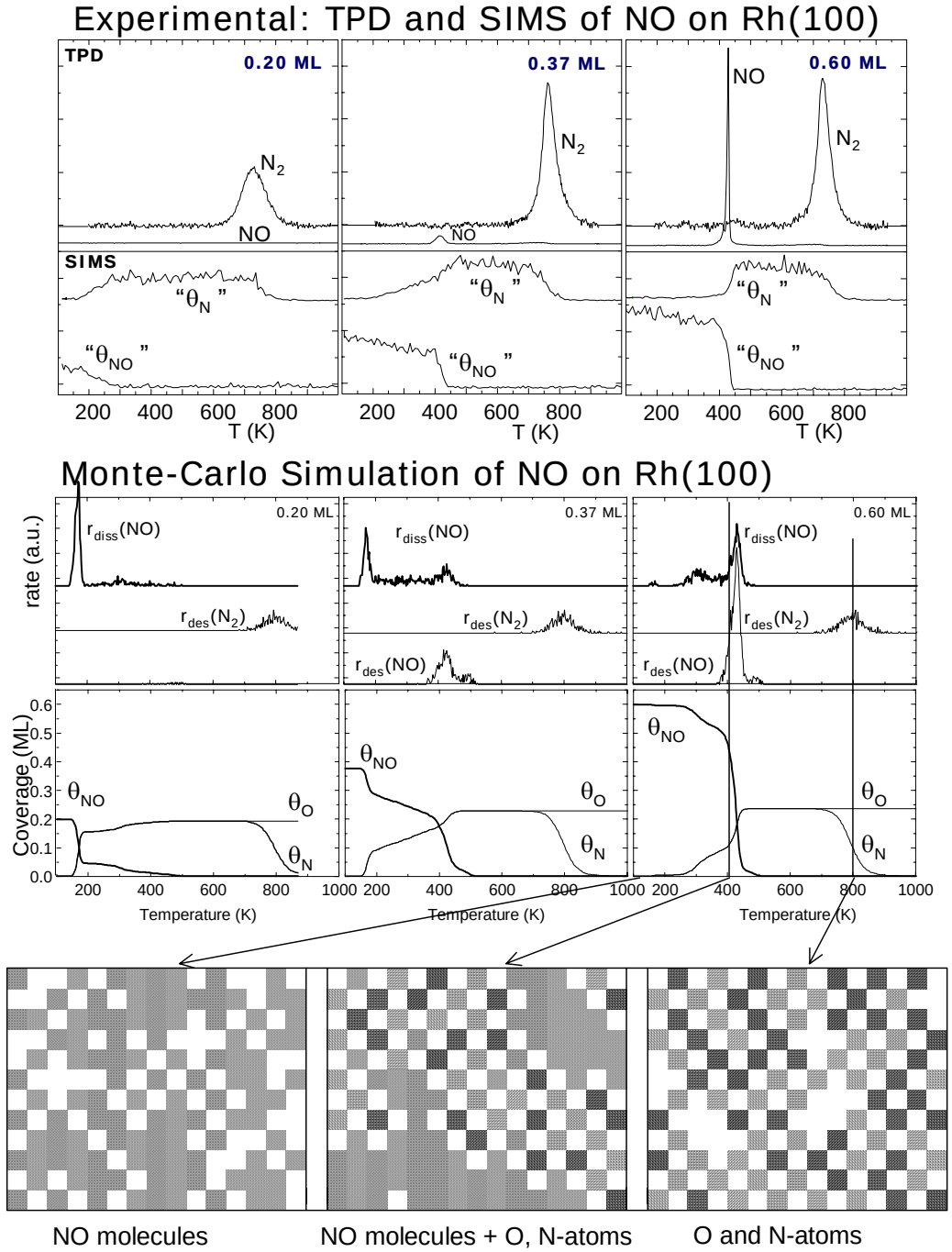

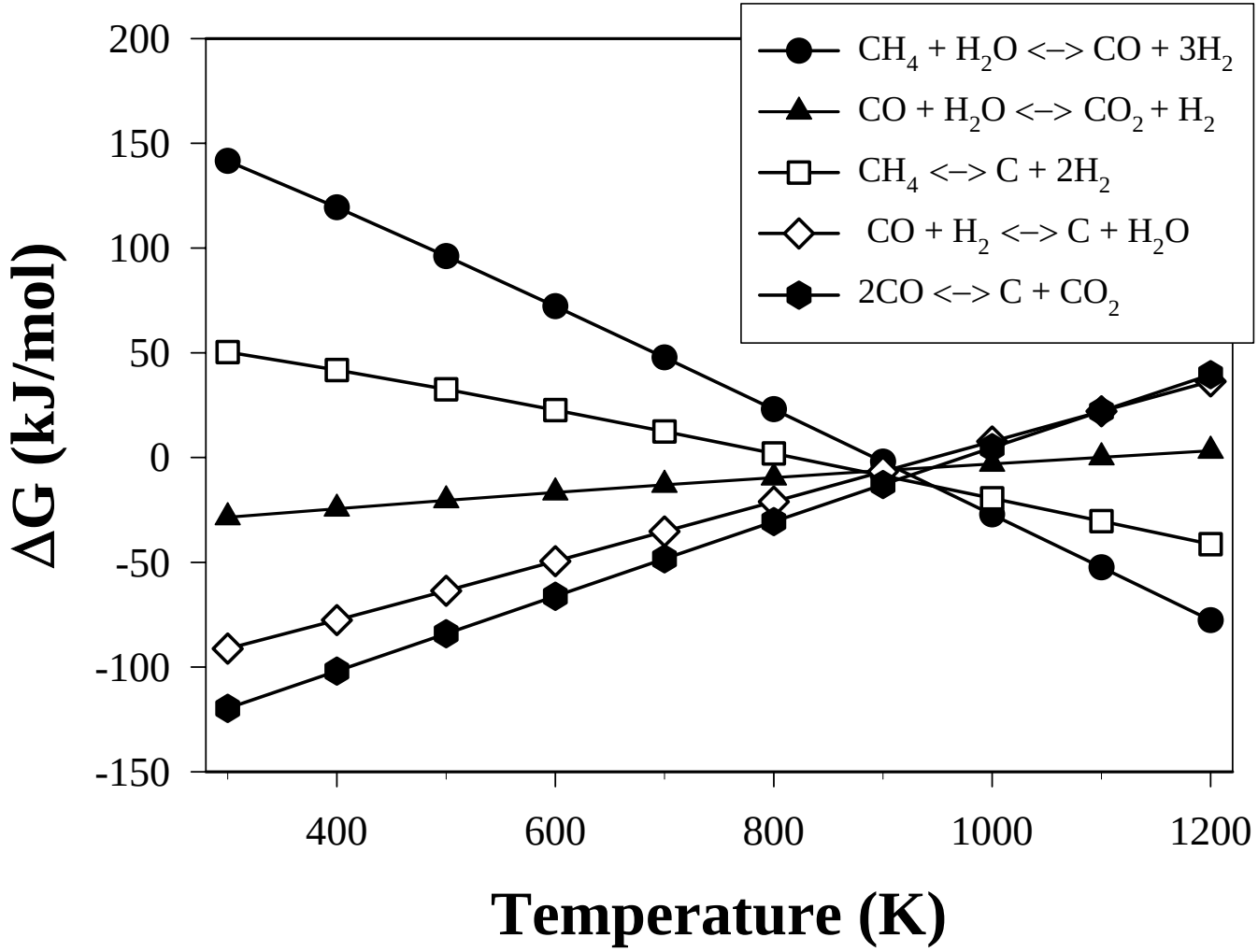

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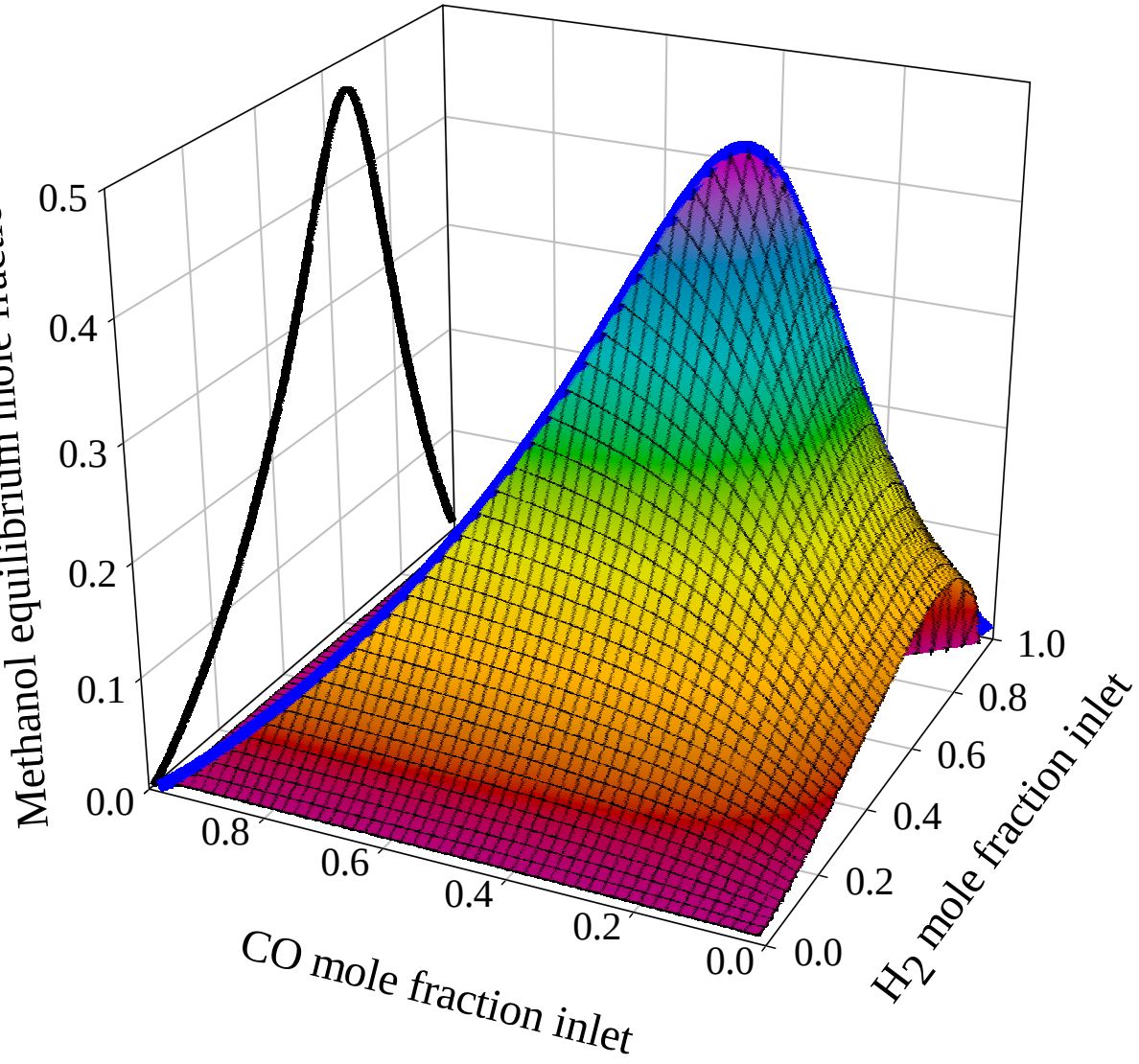

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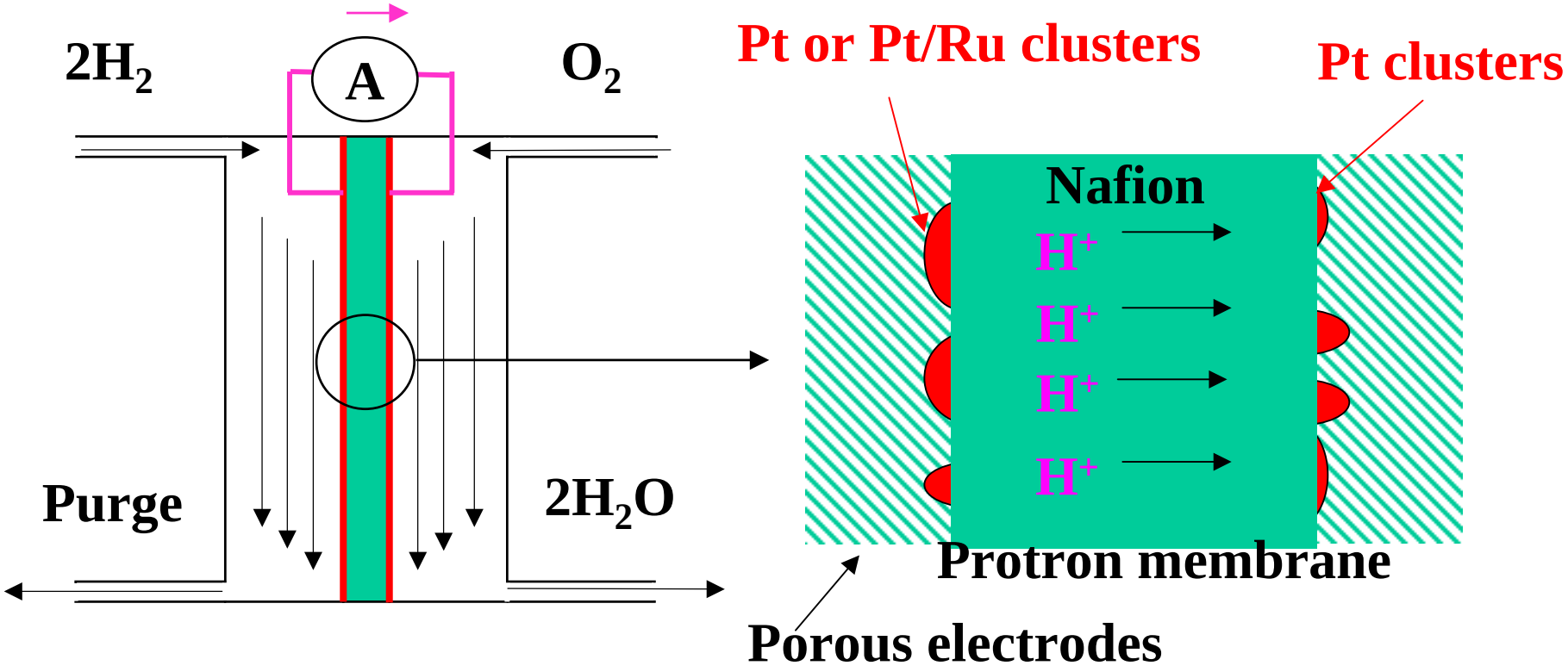

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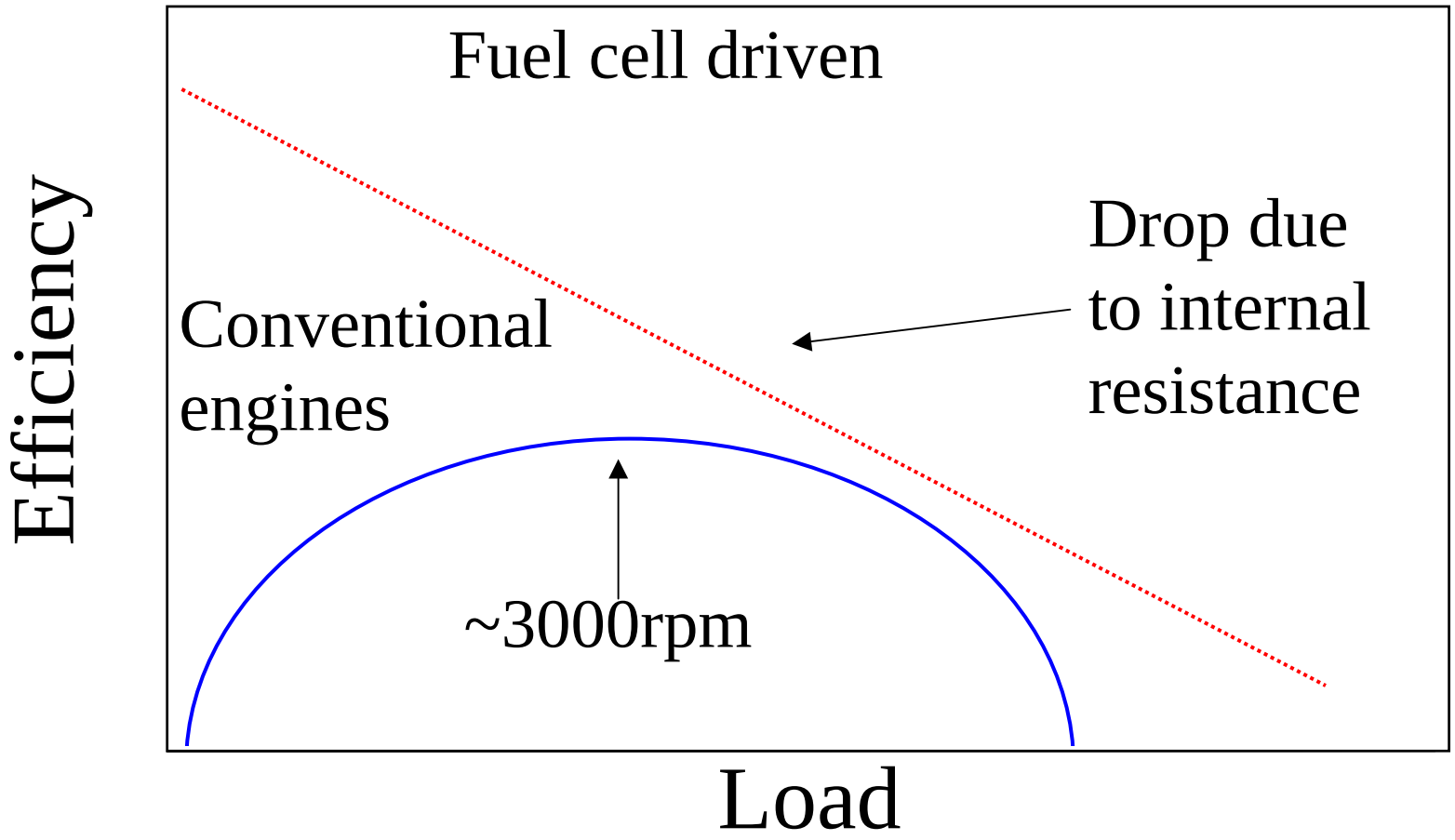

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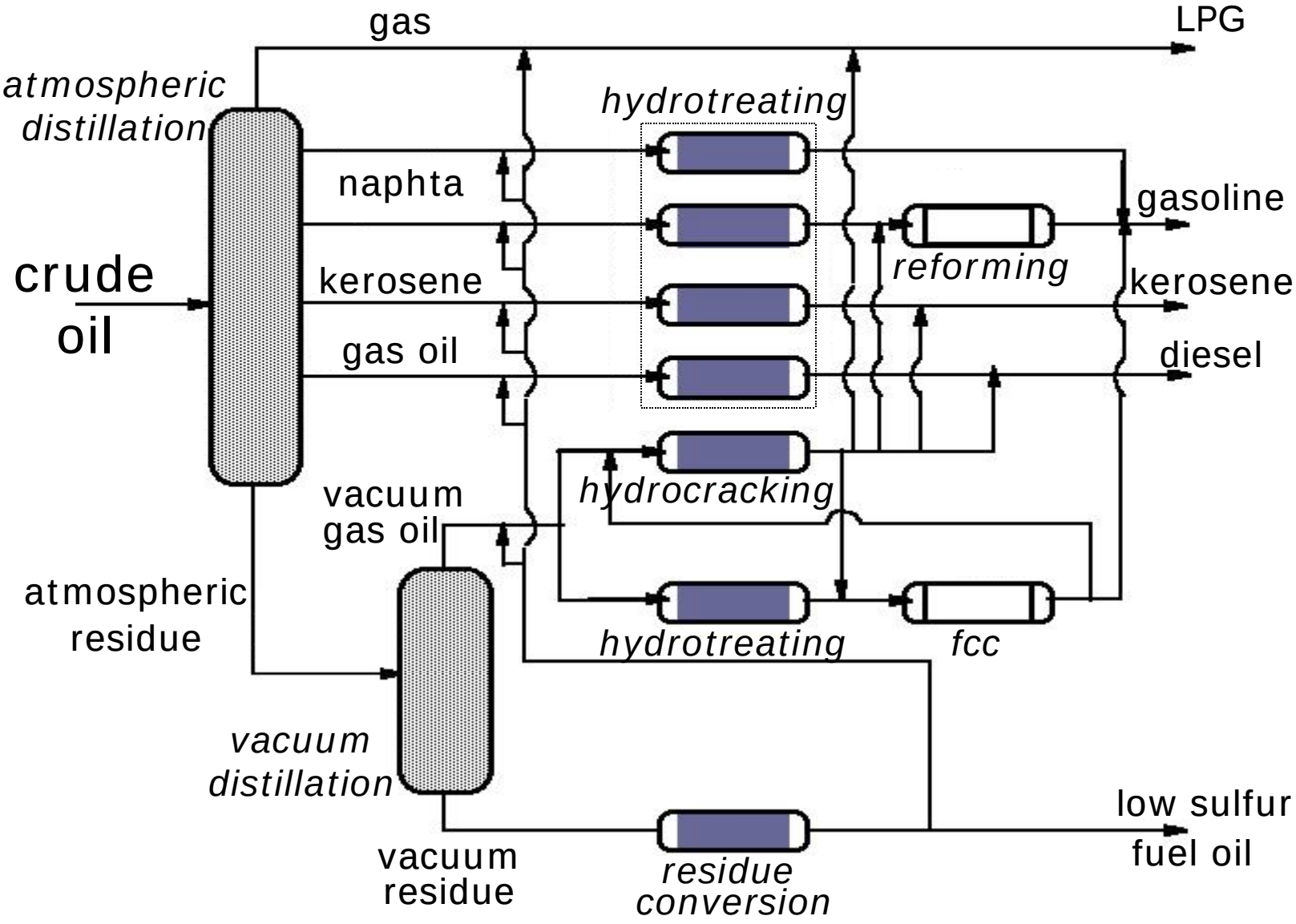

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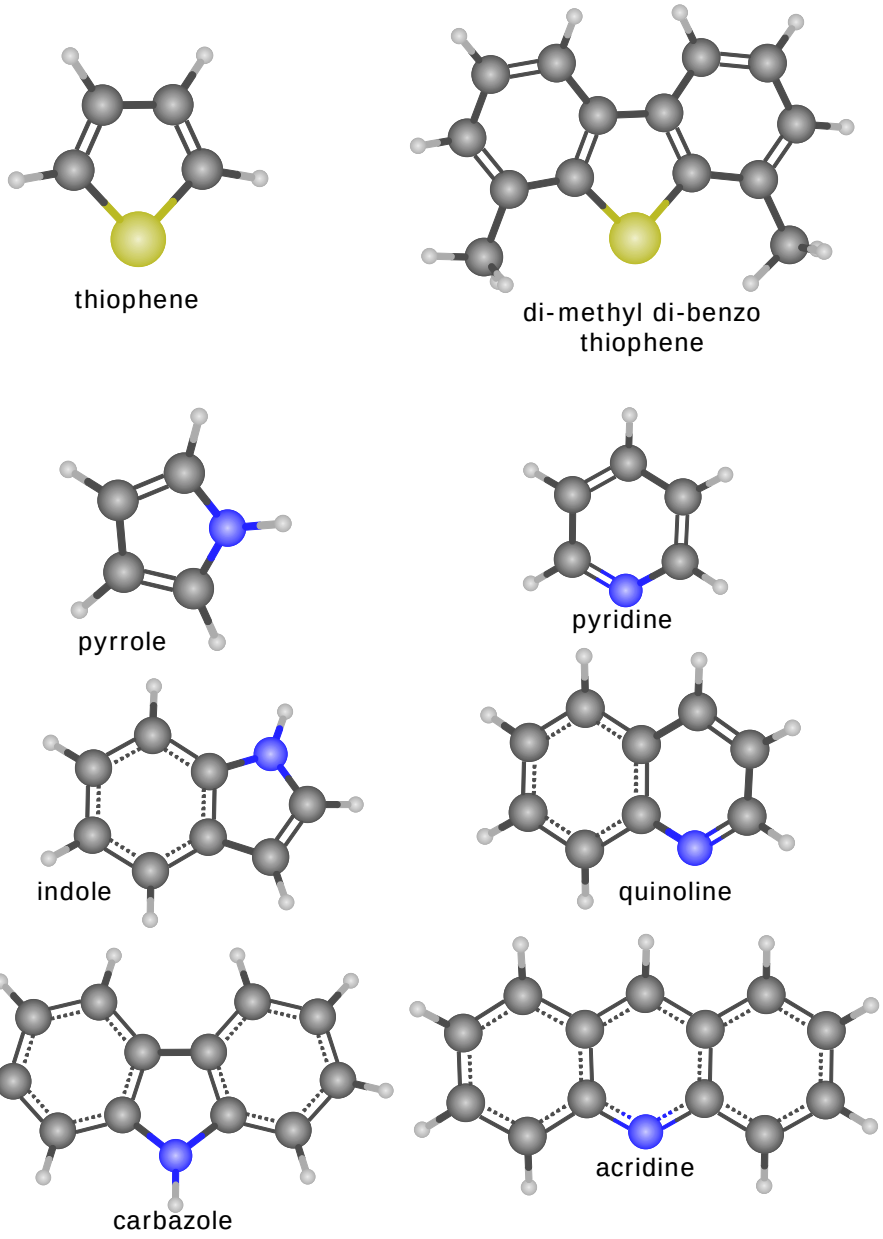

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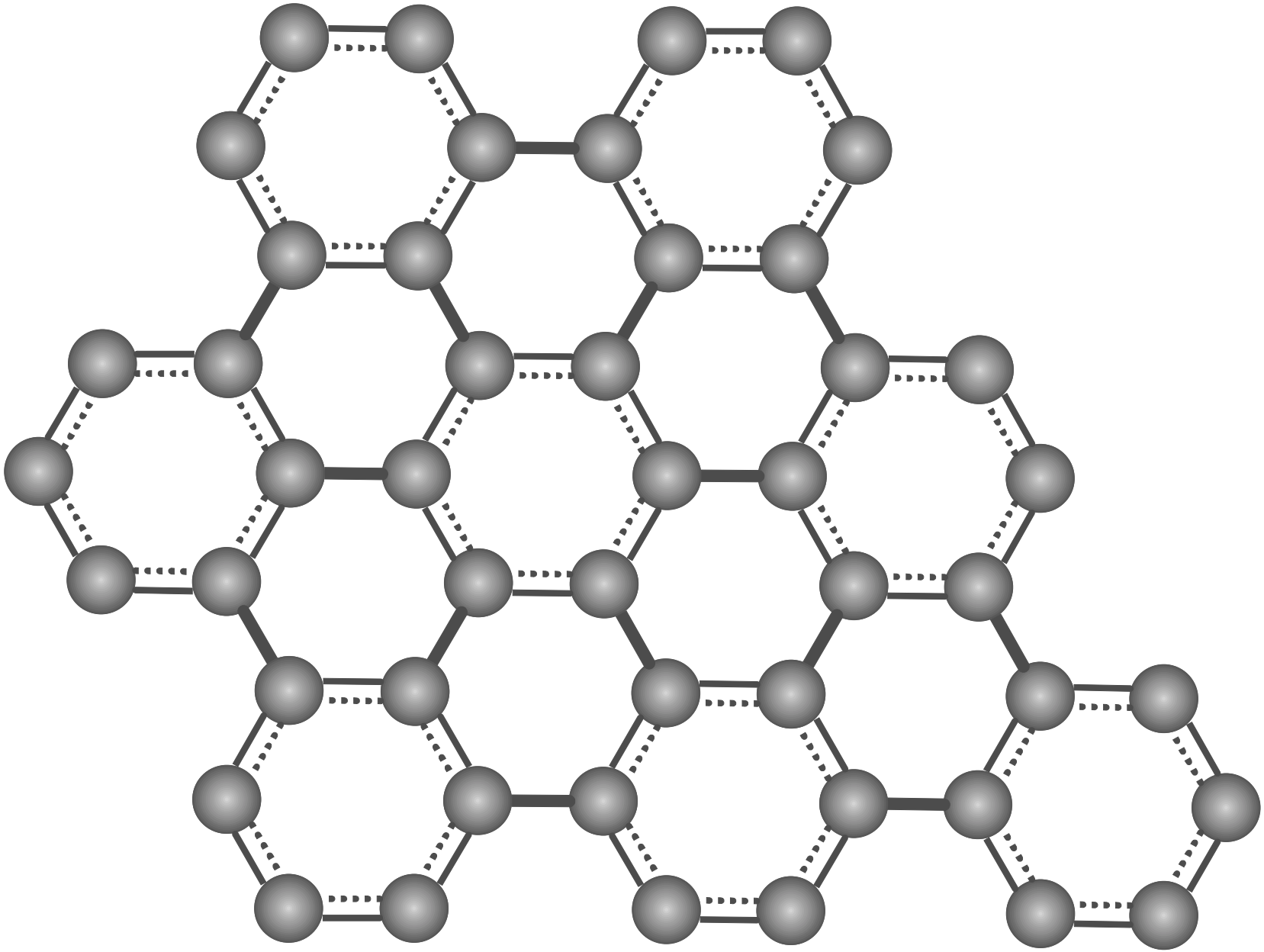

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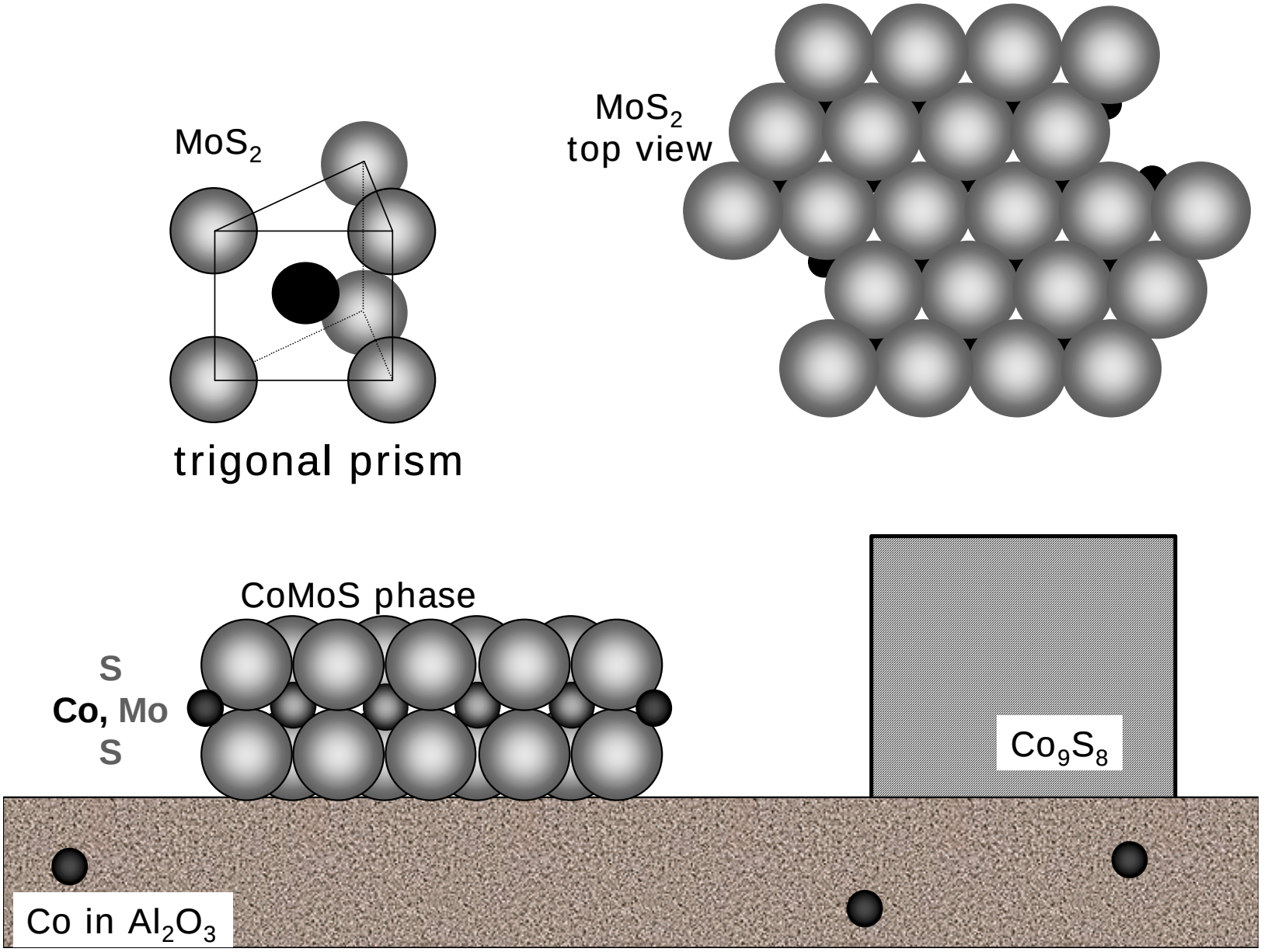

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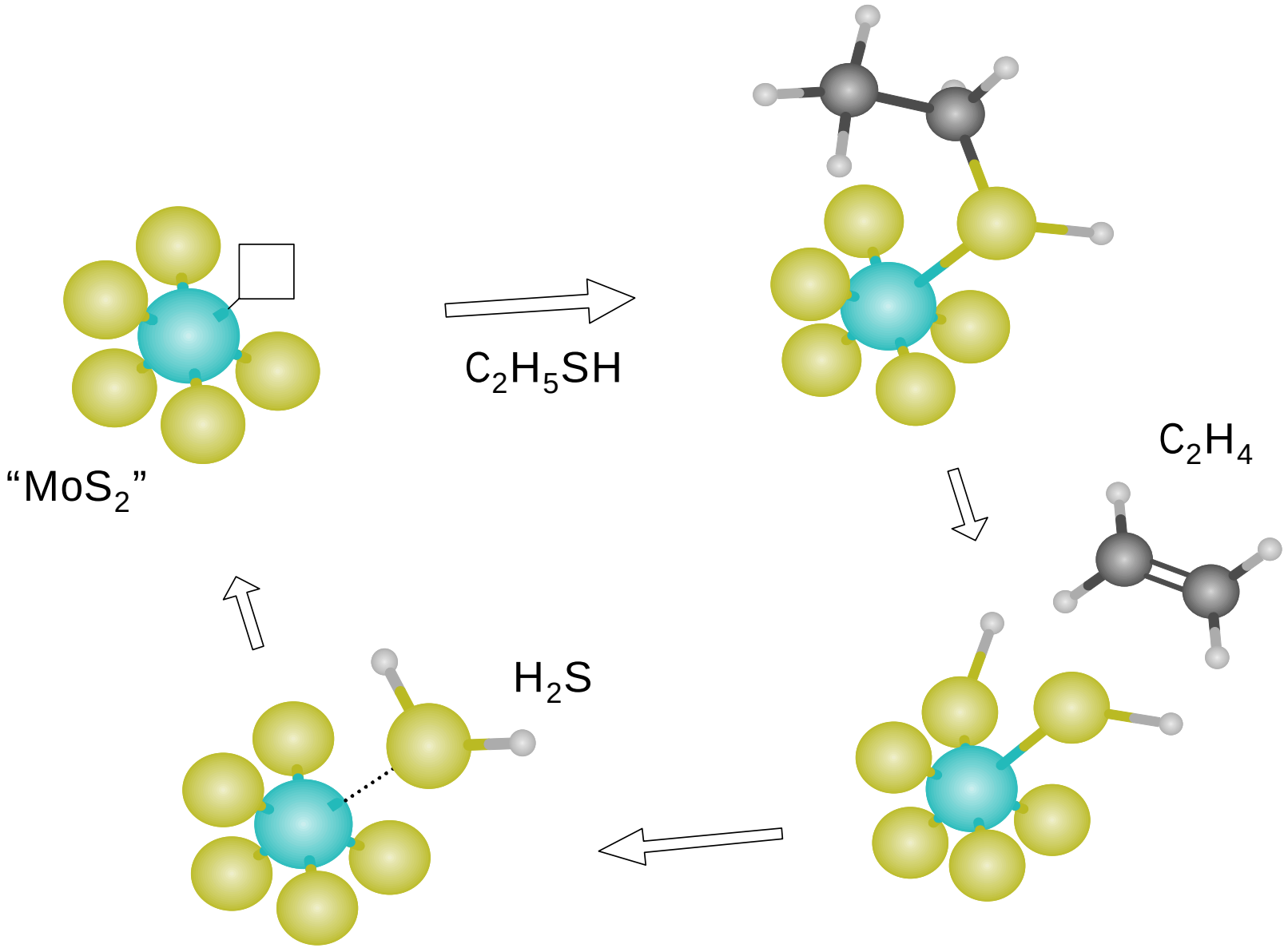

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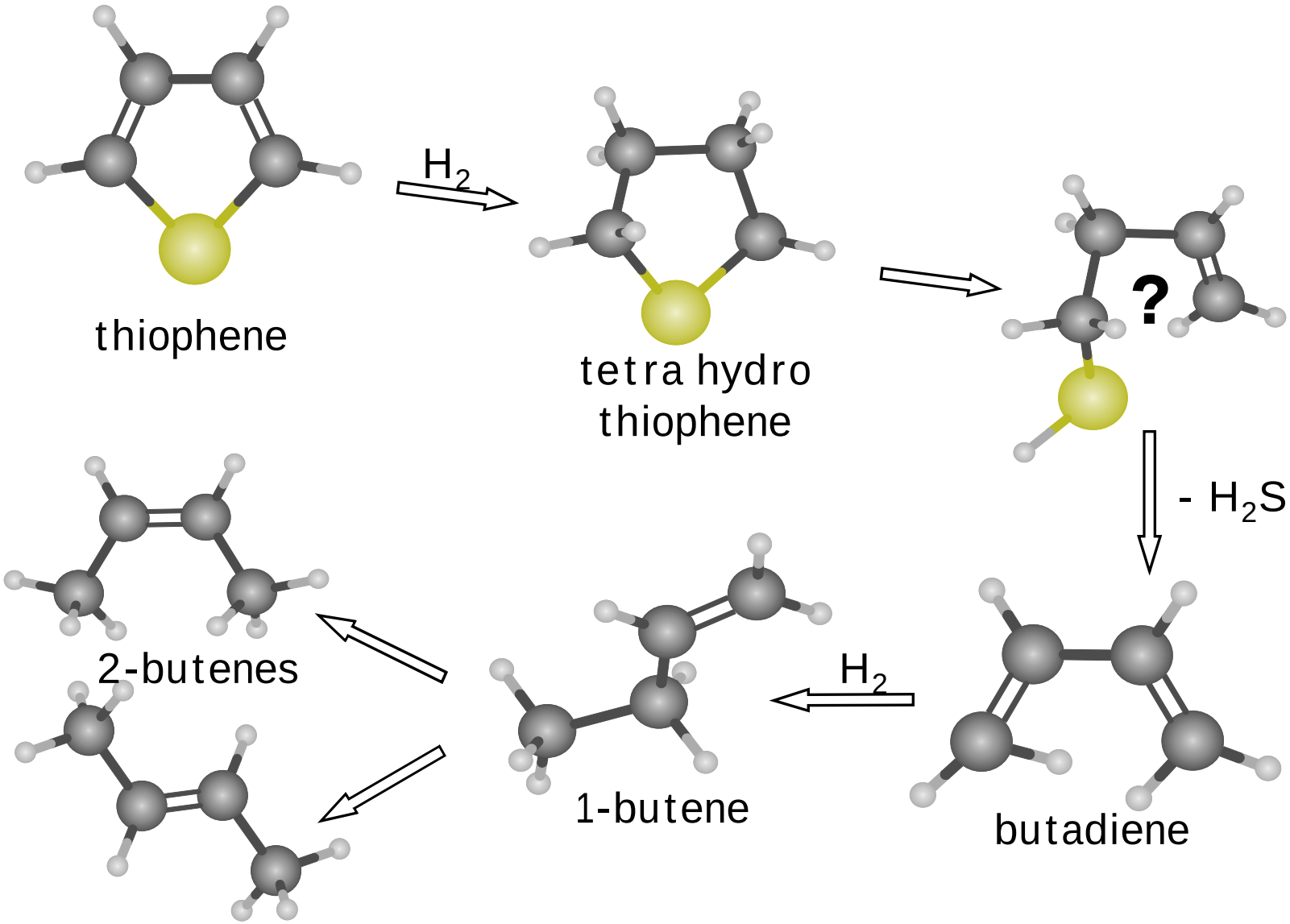

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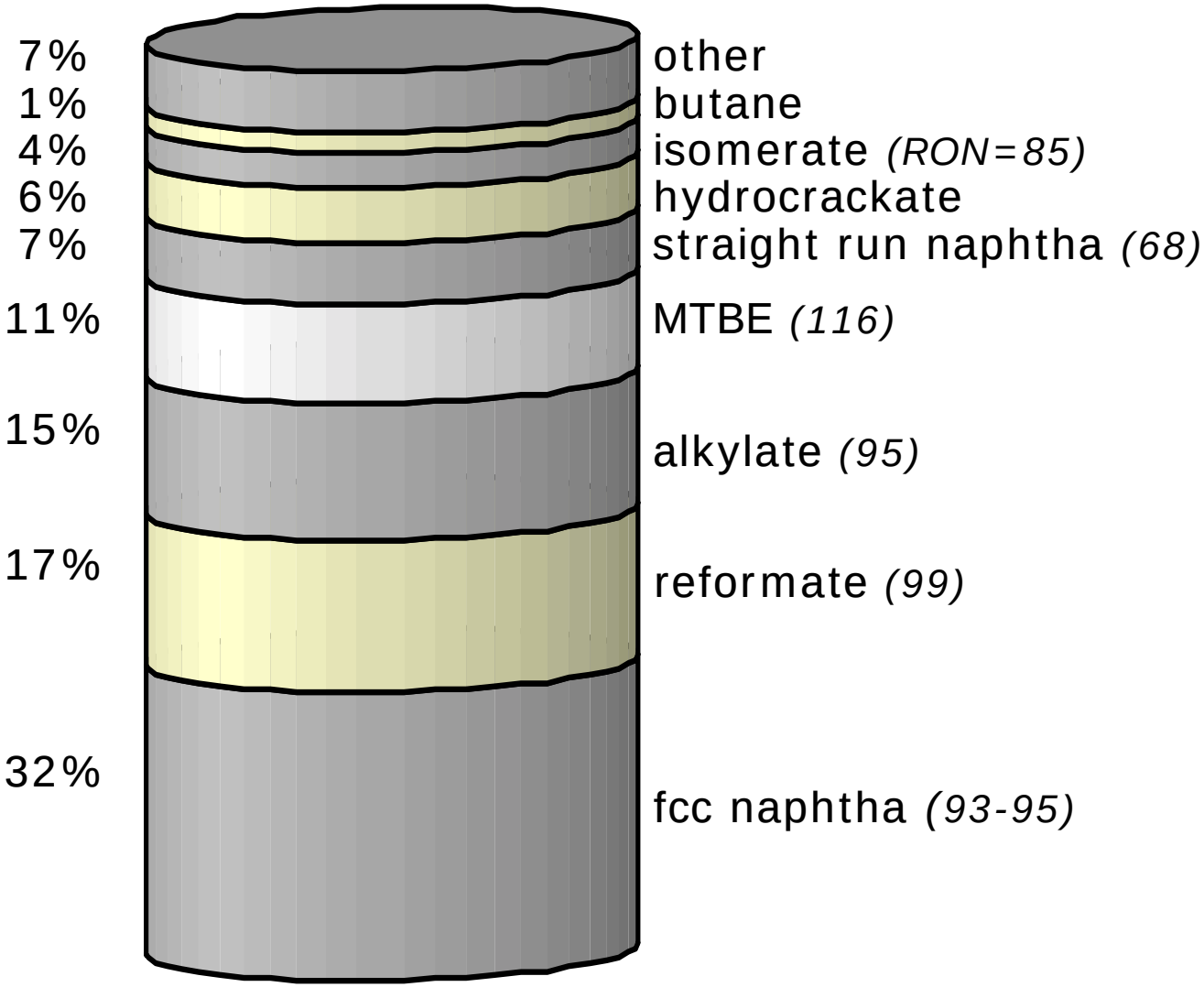

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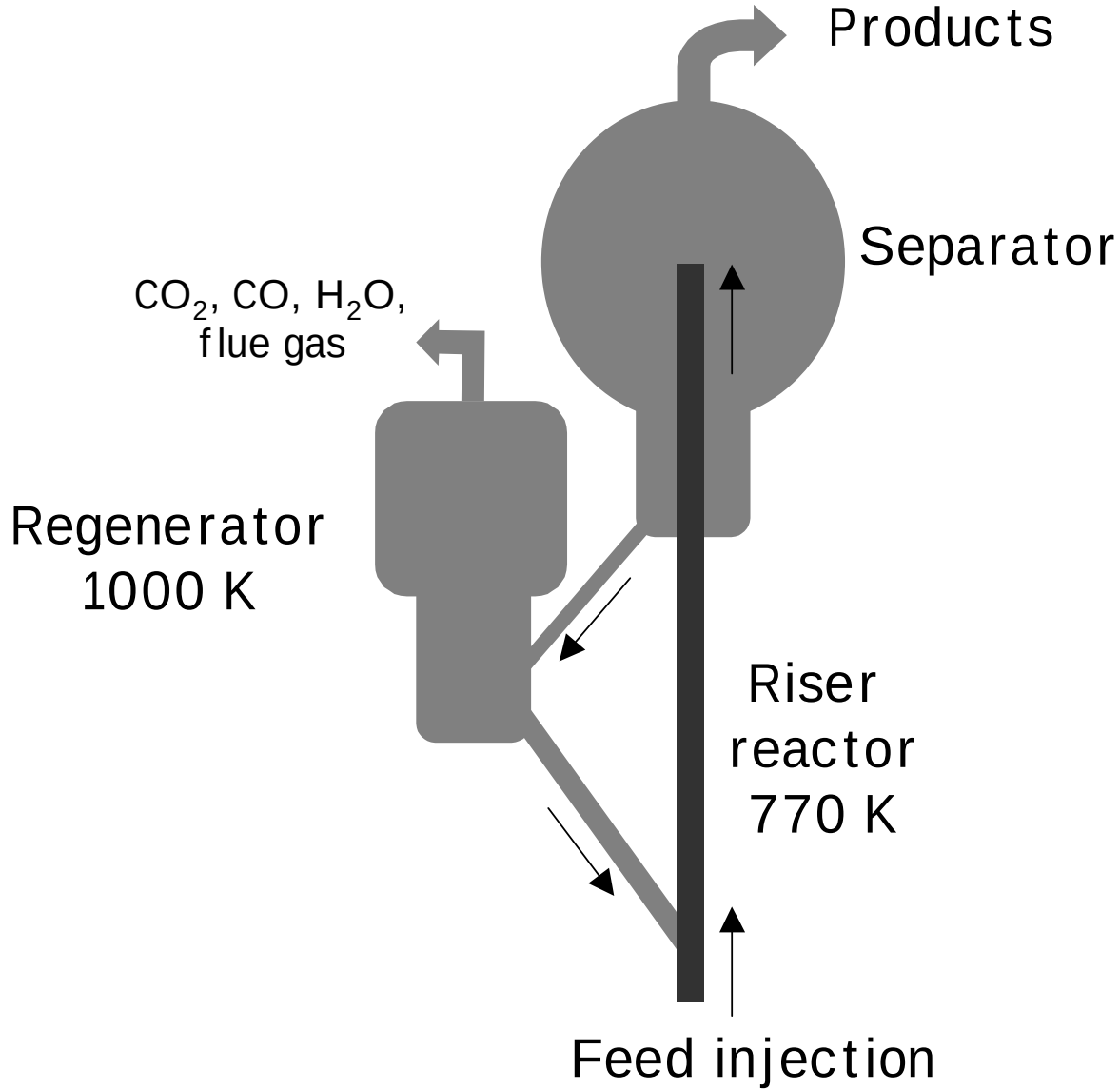

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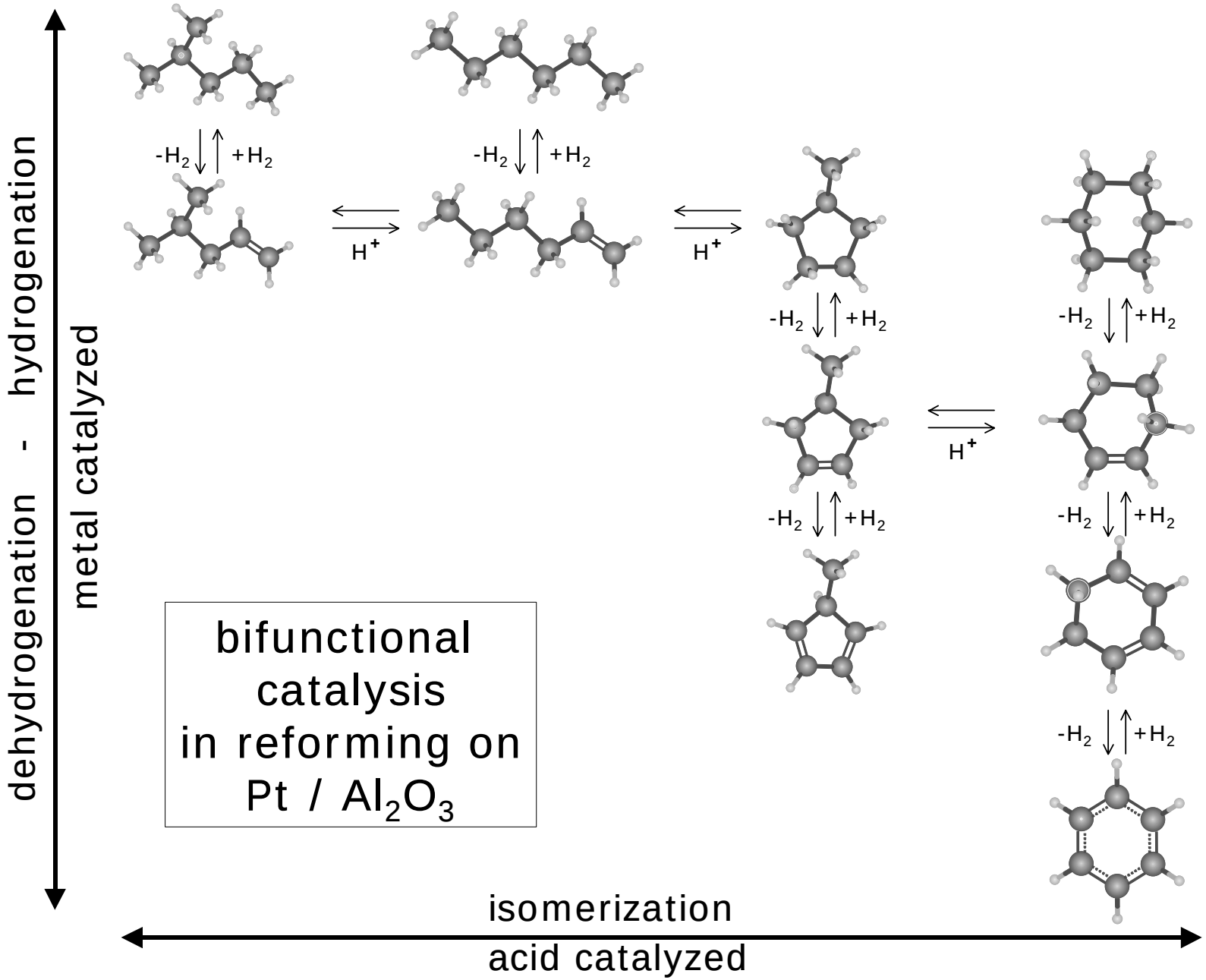

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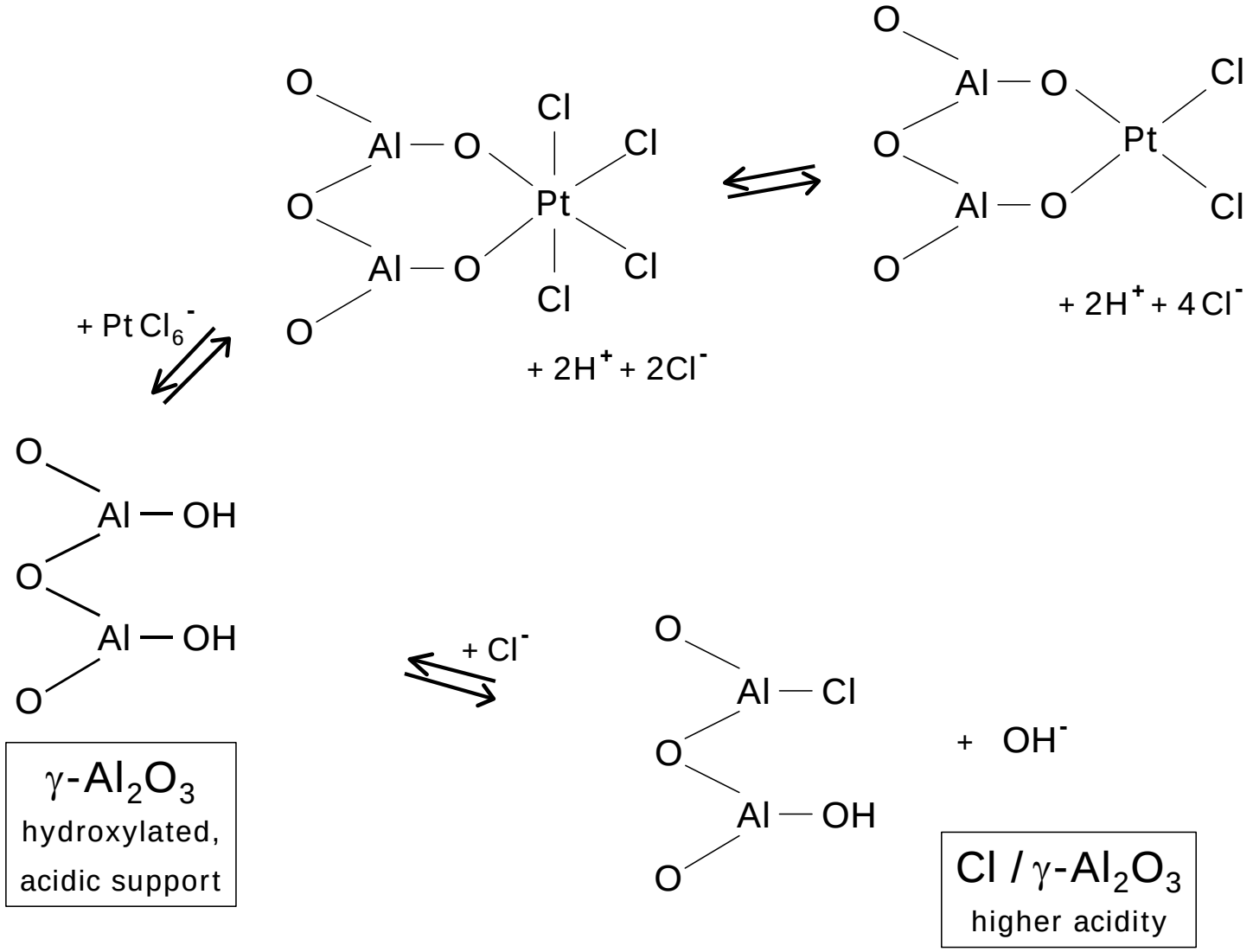

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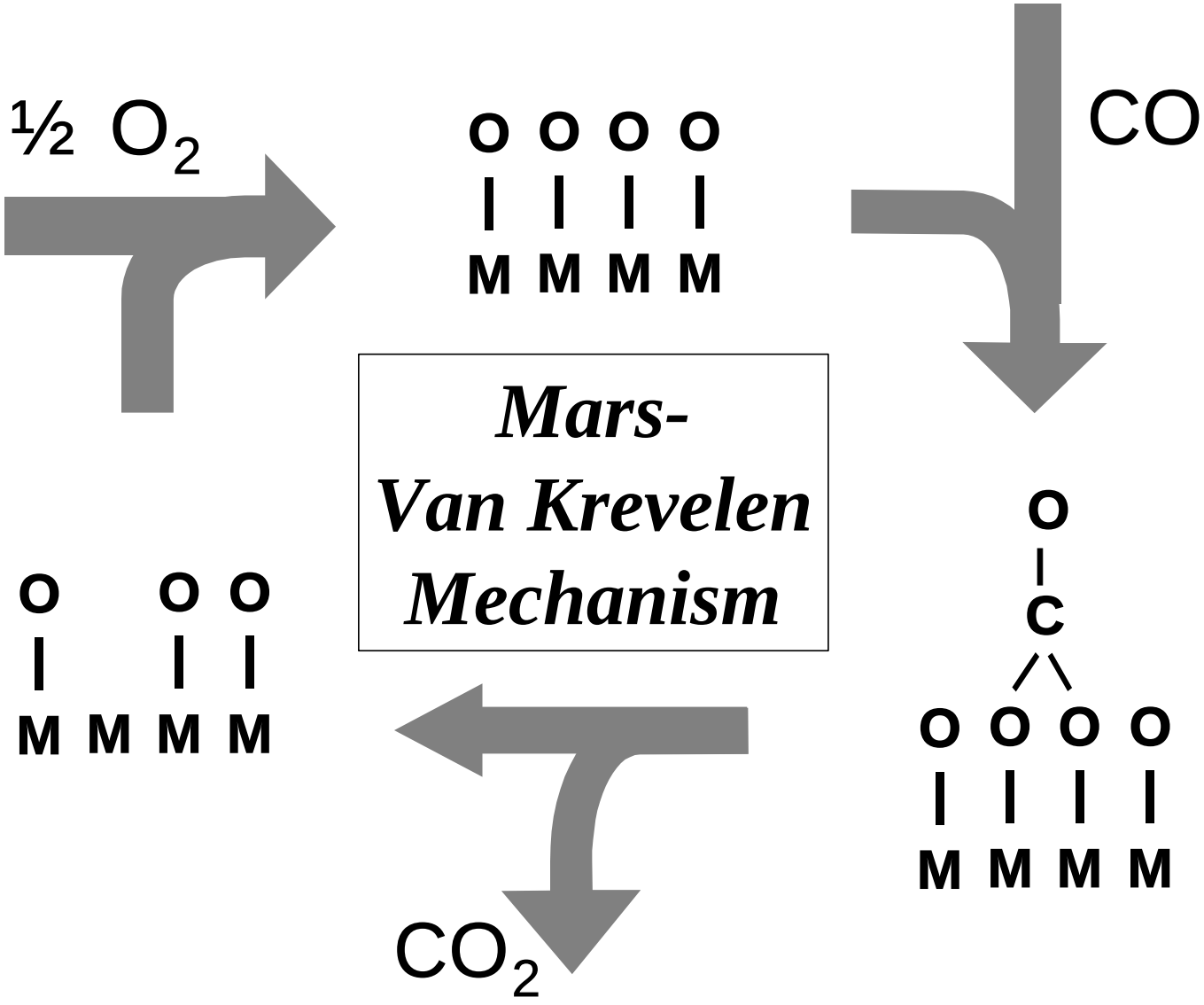

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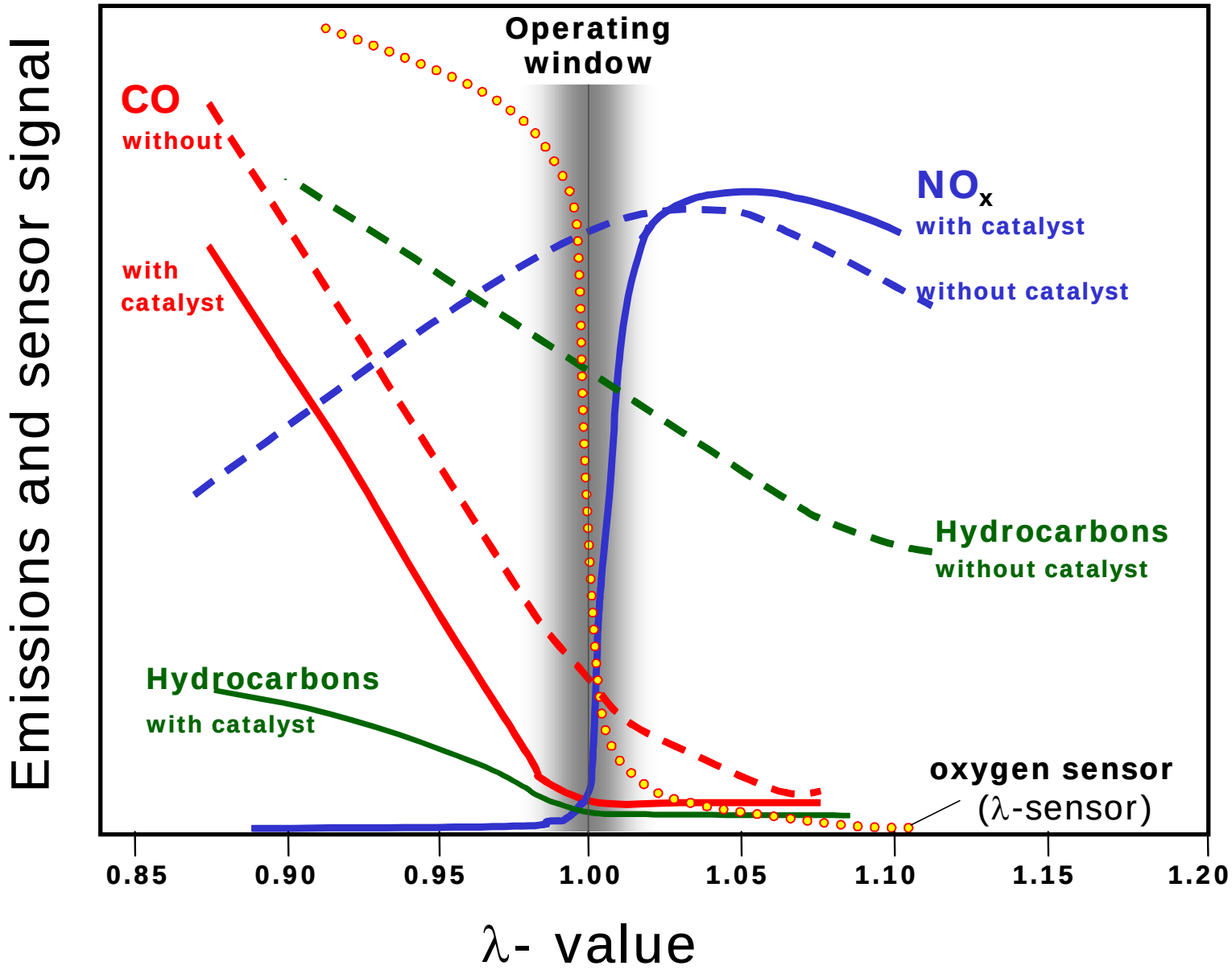

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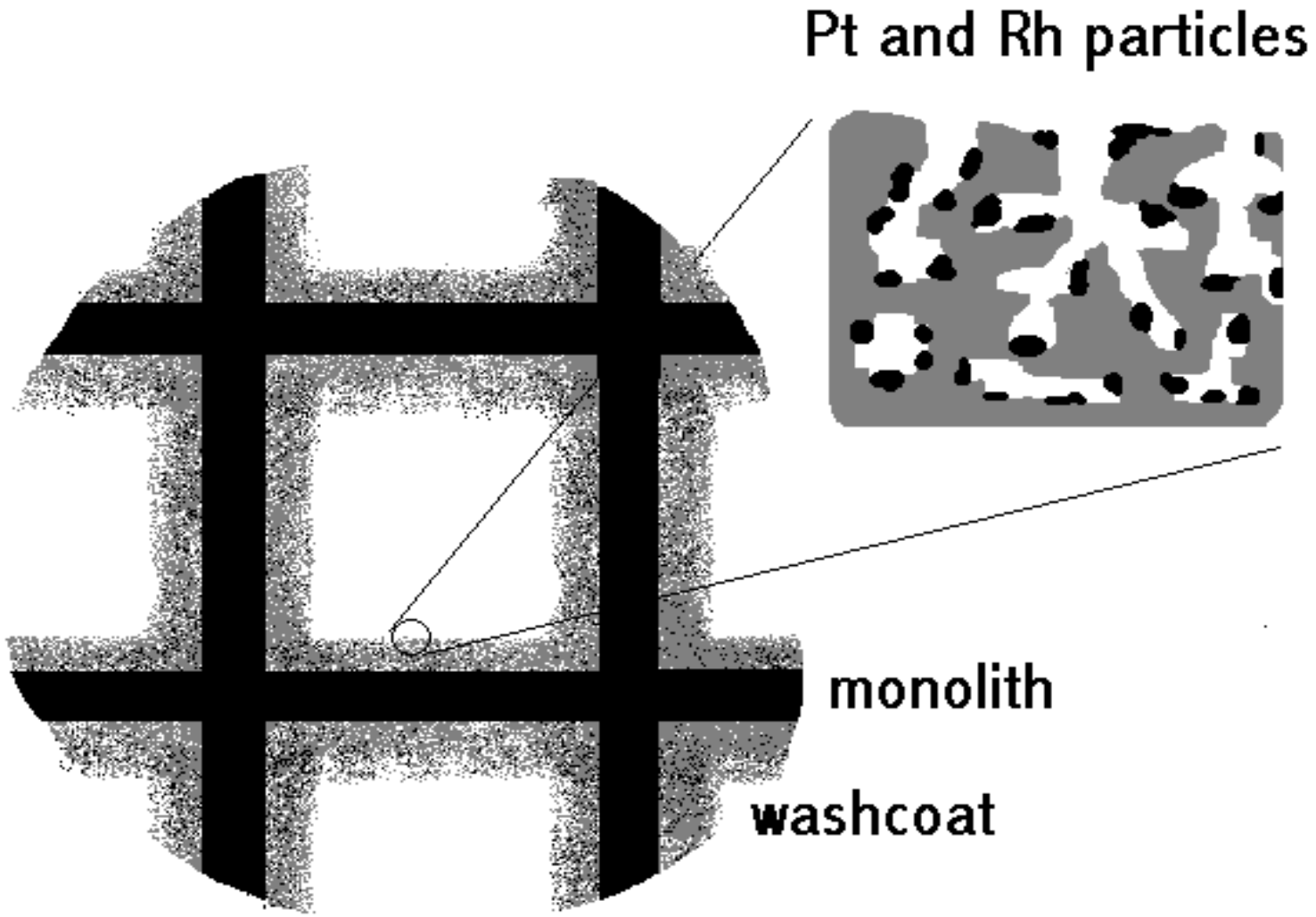

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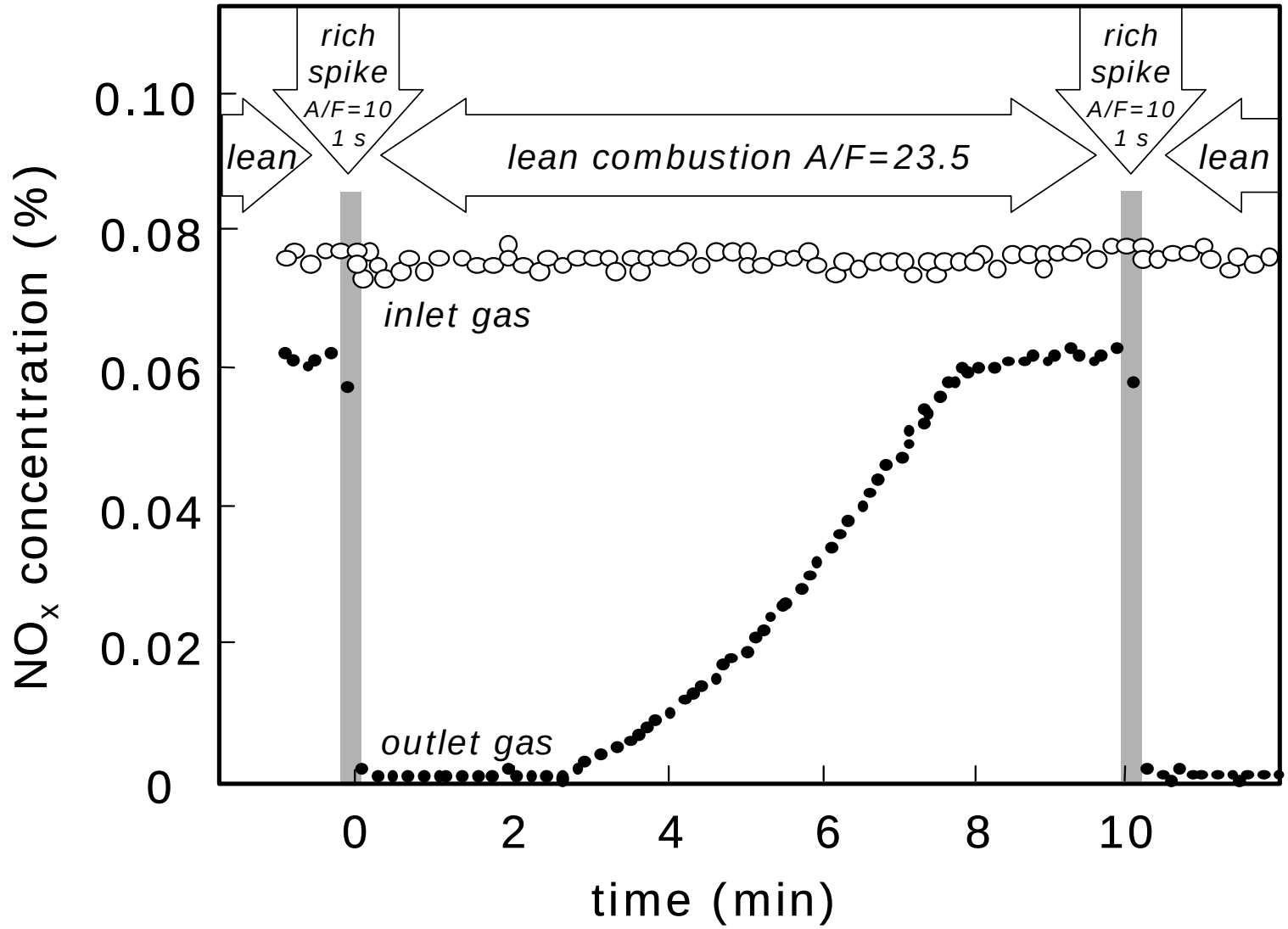

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