

## CORRECTION

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The authors would like to make the following corrections to the published article.

(1) In the Nomenclature, the following should be added:

$A_v$	Avogadro number [mole <sup>-1</sup> ]
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(2) On page 10928, eqn (1) and (2) should be changed as follows. In the correct format, the changes are shown in bold.

Wrong format	Correct format
$k_f = 2.2\mathcal{P}10^6 d_{ij}^2 \sqrt{8\pi k_B / \mu_{ij}} T^{0.5}$	$k_f = 2.2\mathcal{P}A_v 10^6 d_{ij}^2 \sqrt{8\pi k_B / \mu_{ij}} T^{0.5}$
$k_r = 2.2\mathcal{P}10^{6-b} d_{ij}^2 \sqrt{8\pi k_B / \mu_{ij}} T^{0.5} e^{(-ae \ln b / R_u T)}$	$k_r = 2.2\mathcal{P}A_v 10^{6-b} d_{ij}^2 \sqrt{8\pi k_B / \mu_{ij}} T^{0.5} e^{(-ae \ln 10 / R_u T)}$

This change will affect some formulas listed in Table 1 of page 10928. The changes are shown in bold.

**Table 1** Rate coefficients in Arrhenius form:  $k = AT^n \exp(-E/RT)$ . Units are cm<sup>3</sup>, K, mol, s, and kcal

Type	#	Reaction	A	n	E	Ref.
Reversible dimerization	1	$\text{PAH}_i + \text{PAH}_j \rightleftharpoons \text{Dimer}_{ij}^*$	<i>f</i> $2.2\mathcal{P}A_v 10^6 d_{ij}^2 \sqrt{8\pi k_B / \mu_{ij}}$	0.5	0.0	This work
			<i>r</i> $2.2\mathcal{P}A_v 10^{6-b} d_{ij}^2 \sqrt{8\pi k_B / \mu_{ij}}$	0.5	<i>ae ln 10</i>	This work
	2	$\text{PAH}_i + \text{PAH}_{j-1} \rightleftharpoons \text{Dimer}_{ij-1}^*$	<i>f</i> $2.2\mathcal{P}A_v 10^6 d_{ij}^2 \sqrt{8\pi k_B / \mu_{ij}}$	0.5	0.0	This work
			<i>r</i> $2.2\mathcal{P}A_v 10^{6-b} d_{ij}^2 \sqrt{8\pi k_B / \mu_{ij}}$	0.5	<i>ae ln 10</i>	This work
Dehydrogenation	3	$\text{Dimer}_{ij}^* + \text{H} \rightleftharpoons \text{Dimer}_{ij-1}^* + \text{H}_2$	<i>f</i> $10^8$	1.8	16.35	52, 53
			<i>r</i> $8.68 \times 10^4$	2.36	6.09	53
	4	$\text{Dimer}_{ij}^* + \text{OH} \rightleftharpoons \text{Dimer}_{ij-1}^* + \text{H}_2\text{O}$	<i>f</i> $6.72 \times 10^1$	3.33	1.46	53
			<i>r</i> $6.44 \times 10^{-1}$	3.79	6.68	53
Dimer bond formation	5	$\text{Dimer}_{ij}^* \rightleftharpoons \text{Dimer}_{ij-1}^* + \text{H}$	<i>f</i> $1.13 \times 10^{16}$	-0.06	113.8	53
			<i>r</i> $4.17 \times 10^{13}$	0.15	0.0	53
	6	$\text{PAH}_{i-1} + \text{PAH}_{j-1} \rightleftharpoons \text{Dimer}_{ij}$	<i>f</i> $10^9$	0.0	11.5	54
	7	$\text{Dimer}_{ij-1}^* \rightleftharpoons \text{Dimer}_{ij} + \text{H}$	<i>f</i> $10^{11}$	0.0	21.9	53, 54
	8	$\text{Dimer}_{ij}^* \rightleftharpoons \text{Dimer}_{ij} + \text{H}_2$	<i>f</i> $10^8$	0.0	36.5	54

Particle Technology Laboratory, Institute of Process Engineering, Department of Mechanical and Process Engineering, ETH Zürich, Sonneggstrasse 3, Zürich CH-8092, Switzerland. E-mail: [sotiris.pratsinis@ptl.mavt.ethz.ch](mailto:sotiris.pratsinis@ptl.mavt.ethz.ch)



(3) On page 10928, right column after eqn (3):

Wrong value of  $a$

where  $a = 0.38$  and  $b = 1.8$

Correct value of  $a$

where  $a = \mathbf{0.115}$  and  $b = 1.8$

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

