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Pressure-varying Langmuir parameters and stepped nitrogen adsorption on alumina and silica†

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Supporting Information

Pressure-varying Langmuir simulations

Langmuir maximum adsorption capacities, $N_{L,\infty}(p)$, equilibrium adsorption coefficients, $K_L(p)$ and cost functions, $C(p, b_l(p), \mu)$ at each measured surface excess amount and pressure for each of the four adsorbents are listed in four tables.

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Table 1 Pressure-varying Langmuir parameters and estimation for the maximum adsorption capacity, $N_{\mathrm{L},\infty}(p)$ cost function, $C(p,b_l(p),\mu)$ at each relative pressure for N_2 adsorption on α-alumina (AA).[1,2] Within each curly brace is the Bayesian Change Point (BCP) probabilities for each maximum adsorption capacity, $N_{\mathrm{L},\infty}(p)$ and Langmuir equilibrium adsorption coefficient, $K_{\mathrm{L}}(p)$.

p/p_{s}	$N_{\mathrm{L},\infty}(p)$ ($\mu\mathrm{mol\,m^{-2}}$)	$K_{\mathrm{L}}(p)$	$C(p,b_l(p),\mu)$	p/p_{s}	$N_{\mathrm{L},\infty}(p)$ ($\mu\mathrm{mol\,m^{-2}}$)	$K_{\mathrm{L}}(p)$	$C(p,b_l(p),\mu)$
7.1×10^{-4}	4.637 {0.01}	4559 {0.182}	2.14×10^{-5}	0.102	15.29 {0.012}	18.24 {0.708}	3.22×10^{-3}
1.0×10^{-3}	4.946 {0.04}	3289 {0.0}	2.81×10^{-5}	0.113	15.85 {0.004}	16.38 {0.006}	3.52×10^{-3}
1.4×10^{-3}	5.241 {0.02}	2438 {0.024}	3.56×10^{-5}	0.125	16.50 {0.098}	14.60 {0.0}	3.77×10^{-3}
1.9×10^{-3}	5.467 {0.006}	1927 {0.01}	4.71×10^{-5}	0.139	16.97 {0.016}	13.44 {0.0}	3.99×10^{-3}
2.4×10^{-3}	5.651 {0.002}	1588 {0.606}	5.95×10^{-5}	0.155	17.33 {0.02}	12.63 {0.0}	4.21×10^{-3}
3.2×10^{-3}	5.987 {0.0}	1163 {0.376}	7.99×10^{-5}	0.172	17.62 {0.006}	12.02 {0.0}	4.43×10^{-3}
4.1×10^{-3}	6.217 {0.0}	937.7 {0.016}	9.71×10^{-5}	0.190	18.09 {0.0}	11.11 {0.0}	4.73×10^{-3}
5.3×10^{-3}	6.335 {0.0}	824.5 {0.0}	1.15×10^{-4}	0.210	18.96 {0.002}	9.620 {0.0}	5.31×10^{-3}
6.6×10^{-3}	6.498 {0.0}	698.5 {0.0}	1.48×10^{-4}	0.230	19.94 {0.002}	8.277 {0.0}	5.88×10^{-3}
8.0×10^{-3}	6.662 {0.0}	596.3 {0.004}	1.82×10^{-4}	0.250	20.56 {0.04}	7.574 {0.0}	6.32×10^{-3}
9.6×10^{-3}	6.892 {0.006}	484.5 {0.0}	2.36×10^{-4}	0.270	21.40 {0.332}	6.757 {0.0}	6.75×10^{-3}
0.011	7.093 {0.02}	410.0 {0.0}	2.74×10^{-4}	0.290	22.00 {0.098}	6.255 {0.0}	7.14×10^{-3}
0.013	7.707 {0.91}	267.9 {0.0}	3.18×10^{-4}	0.310	22.89 {0.226}	5.609 {0.0}	7.63×10^{-3}
0.016	8.197 {0.068}	201.1 {0.456}	3.81×10^{-4}	0.330	24.05 {0.162}	4.920 {0.0}	8.25×10^{-3}
0.019	8.654 {0.0}	157.8 {0.548}	5.01×10^{-4}	0.350	25.13 {0.004}	4.392 {0.18}	8.86×10^{-3}
0.022	9.087 {0.0}	128.2 {0.0}	6.33×10^{-4}	0.370	26.12 {0.004}	3.991 {0.078}	9.44×10^{-3}
0.026	9.355 {0.0}	112.8 {0.0}	7.67×10^{-4}	0.390	27.35 {0.15}	3.567 {0.024}	1.01×10^{-2}
0.029	9.622 {0.0}	100.0 {0.0}	8.84×10^{-4}	0.410	28.66 {0.85}	3.202 {0.0}	1.09×10^{-2}
0.033	9.834 {0.0}	91.09 {0.0}	9.86×10^{-4}	0.432	31.35 {0.002}	2.625 {0.122}	1.19×10^{-2}
0.038	10.05 {0.0}	83.23 {0.0}	1.08×10^{-3}	0.452	33.90 {0.0}	2.235 {0.334}	1.28×10^{-2}
0.043	10.24 {0.0}	76.74 {0.0}	1.19×10^{-3}	0.473	37.26 {0.004}	1.860 {0.18}	1.39×10^{-2}
0.048	10.67 {0.002}	64.60 {0.0}	1.37×10^{-3}	0.495	40.23 {0.628}	1.616 {0.092}	1.50×10^{-2}
0.053	10.93 {0.0}	58.56 {0.0}	1.50×10^{-3}	0.518	44.30 {0.38}	1.365 {0.0}	1.62×10^{-2}
0.058	11.17 {0.0}	53.46 {0.0}	1.62×10^{-3}	0.541	50.11 {0.06}	1.114 {0.052}	1.76×10^{-2}
0.063	11.46 {0.006}	48.25 {0.0}	1.74×10^{-3}	0.564	57.08 {0.754}	0.910 {0.016}	1.90×10^{-2}
0.068	11.87 {0.0}	42.13 {0.0}	1.91×10^{-3}	0.588	66.55 {0.516}	0.726 {0.126}	2.04×10^{-2}
0.073	12.24 {0.0}	37.53 {0.0}	2.07×10^{-3}	0.613	79.12 {0.764}	0.572 {0.01}	2.20×10^{-2}
0.078	12.67 {0.804}	33.09 {0.056}	2.27×10^{-3}	0.638	100.9 {0.972}	0.417 {0.266}	2.37×10^{-2}
0.084	14.05 {0.068}	23.58 {0.0}	2.57×10^{-3}	0.663	141.2 {—}	0.277 {—}	2.55×10^{-2}
0.092	14.58 {0.028}	21.04 {0.242}	2.89×10^{-3}				

Table 2 Pressure-varying Langmuir parameters and estimation for the maximum adsorption capacity, $N_{\mathrm{L},\infty}(p)$ cost function, $C(p, b_l(p), \mu)$ at each relative pressure for N_2 adsorption on Aluminiumoxid C (DC).[1,2] Within each curly brace is the Bayesian Change Point (BCP) probabilities for each maximum adsorption capacity, $N_{\mathrm{L},\infty}(p)$ and Langmuir equilibrium adsorption coefficient, $K_{\mathrm{L}}(p)$.

p/p_s	$N_{\mathrm{L},\infty}(p)$ (μmol m^{-2})	$K_{\mathrm{L}}(p)$	$C(p, b_l(p), \mu)$	p/p_s	$N_{\mathrm{L},\infty}(p)$ (μmol m^{-2})	$K_{\mathrm{L}}(p)$	$C(p, b_l(p), \mu)$
7.1×10^{-4}	6.019 {0.032}	3758 {0.972}	2.35×10^{-5}	0.102	13.91 {0.008}	34.84 {0.058}	1.76×10^{-3}
1.0×10^{-3}	6.577 {0.022}	2603 {0.002}	2.95×10^{-5}	0.113	14.36 {0.006}	30.09 {0.0}	1.97×10^{-3}
1.4×10^{-3}	6.791 {0.01}	2184 {0.0}	3.58×10^{-5}	0.125	14.79 {0.008}	26.37 {0.0}	2.17×10^{-3}
1.9×10^{-3}	6.982 {0.008}	1853 {0.0}	4.54×10^{-5}	0.139	15.23 {0.012}	23.28 {0.0}	2.40×10^{-3}
2.4×10^{-3}	7.147 {0.01}	1603 {0.046}	5.46×10^{-5}	0.155	15.67 {0.026}	20.63 {0.0}	2.65×10^{-3}
3.2×10^{-3}	7.580 {0.012}	1172 {0.746}	6.83×10^{-5}	0.172	16.10 {0.06}	18.43 {0.002}	2.93×10^{-3}
4.1×10^{-3}	7.858 {0.004}	952.6 {0.21}	8.00×10^{-5}	0.190	16.53 {0.0}	16.58 {0.0}	3.30×10^{-3}
5.3×10^{-3}	8.075 {0.006}	805.3 {0.004}	9.28×10^{-5}	0.210	17.50 {0.08}	13.23 {0.086}	4.02×10^{-3}
6.6×10^{-3}	8.278 {0.002}	686.0 {0.0}	1.13×10^{-4}	0.230	18.50 {0.026}	10.83 {0.492}	4.73×10^{-3}
8.0×10^{-3}	8.465 {0.0}	592.6 {0.0}	1.40×10^{-4}	0.250	19.51 {0.064}	9.049 {0.134}	5.43×10^{-3}
9.6×10^{-3}	8.676 {0.008}	505.7 {0.0}	1.75×10^{-4}	0.270	20.55 {0.596}	7.685 {0.0}	6.14×10^{-3}
0.011	8.864 {0.048}	440.9 {0.002}	2.10×10^{-4}	0.290	21.63 {0.196}	6.593 {0.0}	6.84×10^{-3}
0.013	9.393 {0.336}	316.5 {0.0}	2.45×10^{-4}	0.310	22.71 {0.064}	5.746 {0.256}	7.52×10^{-3}
0.016	9.713 {0.574}	262.0 {0.748}	2.86×10^{-4}	0.330	23.84 {0.0}	5.040 {0.0}	8.21×10^{-3}
0.019	10.03 {0.004}	218.5 {0.302}	3.53×10^{-4}	0.350	24.96 {0.072}	4.468 {0.03}	8.88×10^{-3}
0.022	10.28 {0.022}	190.5 {0.008}	4.16×10^{-4}	0.370	26.77 {0.058}	3.763 {0.0}	9.67×10^{-3}
0.026	10.48 {0.006}	169.5 {0.002}	4.74×10^{-4}	0.390	28.09 {0.002}	3.361 {0.008}	1.04×10^{-2}
0.029	10.66 {0.004}	153.3 {0.0}	5.28×10^{-4}	0.410	29.30 {0.03}	3.055 {0.0}	1.11×10^{-2}
0.033	10.82 {0.002}	140.3 {0.0}	5.79×10^{-4}	0.432	31.03 {0.036}	2.692 {0.0}	1.19×10^{-2}
0.038	10.97 {0.0}	129.6 {0.0}	6.30×10^{-4}	0.452	33.05 {0.824}	2.357 {0.0}	1.27×10^{-2}
0.043	11.11 {0.002}	120.4 {0.0}	6.91×10^{-4}	0.473	35.53 {0.144}	2.038 {0.0}	1.36×10^{-2}
0.048	11.36 {0.002}	105.0 {0.0}	7.91×10^{-4}	0.495	38.38 {0.032}	1.758 {0.0}	1.45×10^{-2}
0.053	11.58 {0.0}	93.35 {0.0}	8.84×10^{-4}	0.518	41.81 {0.01}	1.505 {0.0}	1.55×10^{-2}
0.058	11.78 {0.0}	84.34 {0.0}	9.71×10^{-4}	0.541	46.24 {0.014}	1.265 {0.0}	1.66×10^{-2}
0.063	11.98 {0.0}	76.51 {0.0}	1.06×10^{-3}	0.564	50.10 {0.998}	1.109 {0.07}	1.77×10^{-2}
0.068	12.15 {0.0002}	70.46 {0.0}	1.14×10^{-3}	0.588	57.85 {0.322}	0.885 {0.932}	1.92×10^{-2}
0.073	12.31 {0.002}	65.51 {0.0}	1.21×10^{-3}	0.613	68.47 {0.888}	0.692 {0.0}	2.10×10^{-2}
0.078	12.46 {0.006}	60.98 {0.0}	1.29×10^{-3}	0.638	91.77 {0.872}	0.465 {0.0}	2.31×10^{-2}
0.084	12.99 {0.036}	48.64 {0.048}	1.41×10^{-3}	0.663	132.7 {—}	0.295 {—}	2.54×10^{-2}
0.092	13.46 {0.022}	40.75 {0.896}	1.57×10^{-3}				

Table 3 Pressure-varying Langmuir parameters and estimation for the maximum adsorption capacity, $N_{\mathrm{L},\infty}(p)$ cost function, $C(p,b_l(p),\mu)$ at each relative pressure for N_2 adsorption on LiChrospher Si-1000 (LiC).[3] Within each curly brace is the Bayesian Change Point (BCP) probabilities for each maximum adsorption capacity, $N_{\mathrm{L},\infty}(p)$ and Langmuir equilibrium adsorption coefficient, $K_{\mathrm{L}}(p)$.

p/p_s	$N_{\mathrm{L},\infty}(p)$ (μmol m^{-2})	$K_{\mathrm{L}}(p)$	$C(p,b_l(p),\mu)$	p/p_s	$N_{\mathrm{L},\infty}(p)$ (μmol m^{-2})	$K_{\mathrm{L}}(p)$	$C(p,b_l(p),\mu)$
2.9×10^{-4}	4.652 {0.0}	9452 {0.006}	1.70×10^{-5}	0.050	12.00 {0.112}	79.03 {0.0}	8.37×10^{-4}
3.5×10^{-4}	4.816 {0.0}	8146 {0.01}	1.93×10^{-5}	0.058	12.32 {0.616}	68.66 {0.0}	9.85×10^{-4}
4.2×10^{-4}	4.987 {0.0}	6995 {0.0}	2.21×10^{-5}	0.068	13.05 {0.018}	51.99 {0.0}	1.14×10^{-3}
5.1×10^{-4}	5.130 {0.0}	6138 {0.016}	2.53×10^{-5}	0.079	13.56 {0.048}	43.26 {0.0}	1.30×10^{-3}
6.1×10^{-4}	5.280 {0.0}	5365 {0.024}	2.86×10^{-5}	0.091	14.07 {0.004}	36.52 {0.152}	1.51×10^{-3}
7.3×10^{-4}	5.469 {0.0}	4563 {0.41}	3.22×10^{-5}	0.105	14.64 {0.016}	30.50 {0.69}	1.81×10^{-3}
8.6×10^{-4}	5.592 {0.0}	4087 {0.232}	3.61×10^{-5}	0.120	15.11 {0.006}	26.44 {0.174}	2.10×10^{-3}
1.0×10^{-3}	5.762 {0.0}	3536 {0.108}	4.05×10^{-5}	0.137	15.78 {0.0}	22.04 {0.004}	2.41×10^{-3}
1.2×10^{-3}	5.899 {0.0}	3140 {0.186}	4.53×10^{-5}	0.155	16.38 {0.0}	18.91 {0.002}	2.72×10^{-3}
1.4×10^{-3}	6.040 {0.0544}	2786 {0.002}	5.04×10^{-5}	0.174	16.94 {0.002}	16.53 {0.086}	3.06×10^{-3}
1.6×10^{-3}	6.192 {0.0}	2454 {0.178}	5.63×10^{-5}	0.195	17.49 {0.0}	14.59 {0.006}	3.46×10^{-3}
1.8×10^{-3}	6.378 {0.458}	2115 {0.096}	6.29×10^{-5}	0.218	18.40 {0.0}	12.06 {0.004}	4.05×10^{-3}
2.1×10^{-3}	6.530 {0.0}	1873 {0.052}	7.05×10^{-5}	0.241	19.30 {0.0}	10.18 {0.008}	4.66×10^{-3}
2.3×10^{-3}	6.684 {0.0}	1662 {0.274}	7.83×10^{-5}	0.264	20.16 {0.0}	8.783 {0.004}	5.26×10^{-3}
2.6×10^{-3}	6.796 {0.0}	1522 {0.096}	8.62×10^{-5}	0.288	21.09 {0.002}	7.587 {0.0}	5.91×10^{-3}
3.0×10^{-3}	6.923 {0.0}	1378 {0.192}	9.48×10^{-5}	0.313	22.08 {0.808}	6.578 {0.004}	6.63×10^{-3}
3.3×10^{-3}	7.086 {0.0}	1220 {0.016}	1.04×10^{-4}	0.338	23.36 {0.152}	5.578 {0.004}	7.44×10^{-3}
3.7×10^{-3}	7.184 {0.0}	1131 {0.132}	1.13×10^{-4}	0.363	24.79 {0.042}	4.730 {0.004}	8.31×10^{-3}
4.2×10^{-3}	7.327 {0.002}	1019 {0.13}	1.23×10^{-4}	0.388	26.37 {0.008}	4.042 {0.004}	9.23×10^{-3}
4.6×10^{-3}	7.513 {0.0}	892.0 {0.014}	1.33×10^{-4}	0.413	28.22 {0.07}	3.405 {0.022}	1.02×10^{-2}
5.1×10^{-3}	7.623 {0.0}	824.2 {0.096}	1.45×10^{-4}	0.438	30.16 {0.384}	2.916 {0.032}	1.12×10^{-2}
5.7×10^{-3}	7.803 {0.002}	728.6 {0.004}	1.59×10^{-4}	0.463	32.45 {0.382}	2.485 {0.032}	1.23×10^{-2}
6.2×10^{-3}	7.930 {0.0}	668.2 {0.004}	1.73×10^{-4}	0.488	35.08 {0.278}	2.113 {0.032}	1.34×10^{-2}
6.9×10^{-3}	8.084 {0.0}	602.9 {0.0}	1.90×10^{-4}	0.513	38.24 {0.336}	1.784 {0.328}	1.46×10^{-2}
7.6×10^{-3}	8.239 {0.0}	545.3 {0.00}	2.05×10^{-4}	0.538	42.22 {0.35}	1.486 {0.002}	1.58×10^{-2}
8.3×10^{-3}	8.411 {0.006}	489.5 {0.068}	2.21×10^{-4}	0.563	47.09 {0.544}	1.230 {0.004}	1.71×10^{-2}
9.3×10^{-3}	8.718 {0.0}	408.3 {0.576}	2.44×10^{-4}	0.588	53.20 {0.488}	1.008 {0.234}	1.85×10^{-2}
0.011	8.960 {0.424}	356.2 {0.16}	2.68×10^{-4}	0.613	61.93 {0.694}	0.798 {0.228}	2.01×10^{-2}
0.012	9.104 {0.0}	327.1 {0.21}	2.93×10^{-4}	0.638	73.63 {0.454}	0.623 {0.23}	2.17×10^{-2}
0.014	9.465 {0.534}	269.9 {0.008}	3.20×10^{-4}	0.663	93.38 {0.976}	0.453 {0.138}	2.36×10^{-2}
0.016	9.755 {0.04}	231.9 {0.016}	3.53×10^{-4}	0.688	132.8 {1.0}	0.292 {0.476}	2.57×10^{-2}
0.019	9.995 {0.006}	204.3 {0.0}	3.90×10^{-4}	0.712	218.5 {1.0}	0.165 {0.582}	2.79×10^{-2}
0.022	10.19 {0.01}	184.0 {0.0}	4.28×10^{-4}	0.736	624.0 {1.0}	0.054 {—}	3.02×10^{-2}
0.026	10.74 {0.002}	141.4 {0.368}	4.84×10^{-4}	0.760	-601.5 {1.0}	-0.051 {—}	3.28×10^{-2}
0.031	11.12 {0.066}	118.6 {0.254}	5.47×10^{-4}	0.783	-186.2 {1.0}	-0.153 {—}	3.57×10^{-2}
0.036	11.44 {0.014}	101.9 {0.378}	6.36×10^{-4}	0.805	-103.2 {—}	-0.251 {—}	3.92×10^{-2}
0.043	11.75 {0.03}	88.82 {0.0}	7.29×10^{-4}				

Table 4 Pressure-varying Langmuir parameters and estimation for the maximum adsorption capacity, $N_{\mathrm{L},\infty}(p)$ cost function, $C(p, b_l(p), \mu)$ at each relative pressure for N_2 adsorption on ODMS LiChrospher Si-1000 (ODMS LiC).[4] Within each curly brace is the Bayesian Change Point (BCP) probabilities for each maximum adsorption capacity, $N_{\mathrm{L},\infty}(p)$ and Langmuir equilibrium adsorption coefficient, $K_{\mathrm{L}}(p)$.

p/p_s	$N_{\mathrm{L},\infty}(p)$ (μmol m^{-2})	$K_{\mathrm{L}}(p)$	$C(p, b_l(p), \mu)$	p/p_s	$N_{\mathrm{L},\infty}(p)$ (μmol m^{-2})	$K_{\mathrm{L}}(p)$	$C(p, b_l(p), \mu)$
4.6×10^{-4}	0.968 {0.0}	1025 {0.278}	8.18×10^{-4}	0.105	15.46 {0.0}	11.13 {0.28}	5.26×10^{-3}
5.6×10^{-4}	1.157 {0.0}	779.6 {0.004}	9.54×10^{-4}	0.120	16.16 {0.0}	10.07 {0.128}	5.62×10^{-3}
6.8×10^{-4}	1.297 {0.0}	655.0 {0.002}	1.05×10^{-3}	0.136	17.03 {0.0}	8.933 {0.0}	6.06×10^{-3}
8.0×10^{-4}	1.434 {0.0}	562.0 {0.0}	1.13×10^{-3}	0.153	17.69 {0.0}	8.192 {0.0}	6.43×10^{-3}
9.4×10^{-4}	1.551 {0.0}	498.3 {0.002}	1.19×10^{-3}	0.171	18.40 {0.0}	7.482 {0.0}	6.82×10^{-3}
1.1×10^{-3}	1.907 {0.002}	368.2 {0.012}	1.26×10^{-3}	0.190	19.03 {0.0}	6.935 {0.0}	7.27×10^{-3}
1.3×10^{-3}	2.169 {0.0}	304.8 {0.91}	1.33×10^{-3}	0.210	20.20 {0.0}	6.045 {0.0}	7.93×10^{-3}
1.6×10^{-3}	2.389 {0.002}	264.1 {0.178}	1.41×10^{-3}	0.230	21.49 {0.0}	5.265 {0.0}	8.60×10^{-3}
1.9×10^{-3}	2.656 {0.0}	224.9 {0.004}	1.52×10^{-3}	0.250	22.78 {0.0}	4.634 {0.0}	9.24×10^{-3}
2.2×10^{-3}	2.893 {0.0}	197.7 {0.006}	1.61×10^{-3}	0.270	24.20 {0.0}	4.078 {0.0}	9.91×10^{-3}
2.6×10^{-3}	3.102 {0.0}	177.8 {0.066}	1.69×10^{-3}	0.291	25.43 {0.0}	3.677 {0.0}	1.05×10^{-2}
3.0×10^{-3}	3.312 {0.0}	160.7 {0.006}	1.76×10^{-3}	0.311	26.98 {0.0}	3.262 {0.002}	1.12×10^{-2}
3.5×10^{-3}	3.503 {0.0}	147.5 {0.0}	1.83×10^{-3}	0.331	28.62 {0.138}	2.902 {0.0}	1.19×10^{-2}
3.9×10^{-3}	3.708 {0.0}	135.0 {0.056}	1.91×10^{-3}	0.351	30.13 {0.862}	2.628 {0.0}	1.26×10^{-2}
4.5×10^{-3}	4.136 {0.0}	114.1 {0.002}	2.01×10^{-3}	0.371	32.37 {0.0}	2.297 {0.0}	1.34×10^{-2}
5.0×10^{-3}	4.377 {0.0}	104.5 {0.384}	2.11×10^{-3}	0.390	34.50 {0.0}	2.045 {0.0}	1.41×10^{-2}
5.6×10^{-3}	4.715 {0.0}	93.17 {0.316}	2.21×10^{-3}	0.410	36.90 {0.002}	1.816 {0.0}	1.48×10^{-2}
6.2×10^{-3}	4.940 {0.0}	86.65 {0.104}	2.29×10^{-3}	0.430	39.64 {0.0}	1.607 {0.0}	1.55×10^{-2}
6.8×10^{-3}	5.163 {0.0}	80.86 {0.07}	2.37×10^{-3}	0.450	42.42 {0.004}	1.436 {0.0}	1.63×10^{-2}
7.4×10^{-3}	5.567 {0.0}	72.01 {0.048}	2.44×10^{-3}	0.470	46.57 {0.948}	1.235 {0.0}	1.72×10^{-2}
8.1×10^{-3}	5.710 {0.0}	69.18 {0.056}	2.51×10^{-3}	0.490	50.06 {0.046}	1.104 {1.0}	1.81×10^{-2}
8.8×10^{-3}	6.154 {0.0}	61.60 {0.008}	2.58×10^{-3}	0.510	55.52 {0.0}	0.945 {0.0}	1.91×10^{-2}
9.7×10^{-3}	6.593 {0.0}	55.36 {0.05}	2.65×10^{-3}	0.530	62.38 {0.188}	0.798 {0.0}	2.01×10^{-2}
0.011	6.989 {0.0}	50.51 {0.0}	2.73×10^{-3}	0.550	71.02 {0.82}	0.666 {0.0}	2.11×10^{-2}
0.012	7.296 {0.0}	47.15 {0.104}	2.81×10^{-3}	0.570	81.72 {0.242}	0.552 {0.0}	2.21×10^{-2}
0.014	8.185 {0.0}	39.34 {0.16}	2.89×10^{-3}	0.590	95.96 {0.772}	0.449 {0.922}	2.31×10^{-2}
0.016	8.547 {1.0}	36.60 {0.81}	2.98×10^{-3}	0.610	116.3 {0.488}	0.354 {0.084}	2.43×10^{-2}
0.019	9.427 {0.0}	31.17 {0.104}	3.07×10^{-3}	0.630	150.7 {1.0}	0.260 {0.052}	2.55×10^{-2}
0.023	9.982 {0.0}	28.21 {0.002}	3.18×10^{-3}	0.650	225.9 {1.0}	0.165 {0.97}	2.69×10^{-2}
0.028	10.30 {0.0}	26.54 {0.0}	3.32×10^{-3}	0.670	419.6 {1.0}	0.0844 {—}	2.82×10^{-2}
0.034	10.85 {0.0}	24.05 {0.0}	3.45×10^{-3}	0.690	7570 {1.0}	0.0044 {—}	2.97×10^{-2}
0.041	11.24 {0.0}	22.35 {0.002}	3.62×10^{-3}	0.710	-432.5 {0.48}	-0.0735 {—}	3.14×10^{-2}
0.048	11.61 {0.0}	20.86 {0.0}	3.78×10^{-3}	0.730	-201.8 {0.764}	-0.149 {—}	3.32×10^{-2}
0.056	11.94 {0.0}	19.64 {0.0}	3.94×10^{-3}	0.751	-128.7 {0.262}	-0.219 {—}	3.53×10^{-2}
0.066	12.97 {0.0}	16.47 {0.0}	4.17×10^{-3}	0.771	-92.50 {0.774}	-0.287 {—}	3.76×10^{-2}
0.078	13.72 {0.0}	14.54 {0.562}	4.45×10^{-3}	0.791	-70.02 {0.022}	-0.353 {—}	4.03×10^{-2}
0.091	14.67 {0.0}	12.52 {0.032}	4.87×10^{-3}	0.811	-55.83 {—}	-0.414 {—}	4.33×10^{-2}