

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood.

| Sample | Time | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|--------|------|--|---|---|------------------------------------|
| Iroko | 0 | 0.27724 | 0.88334 | 0.40221 | 0.84161 |
| Iroko | 5 | 0.12024 | 0.84117 | 0.21184 | 0.81984 |
| Iroko | 10 | 0.09184 | 0.83133 | 0.13470 | 0.81026 |
| Iroko | 15 | 0.08128 | 0.83107 | 0.09877 | 0.80585 |
| Iroko | 20 | 0.07494 | 0.83075 | 0.08194 | 0.80291 |
| Iroko | 25 | 0.07058 | 0.83039 | 0.07451 | 0.80094 |
| Iroko | 30 | 0.06723 | 0.83004 | 0.06950 | 0.79955 |
| Iroko | 35 | 0.06451 | 0.82965 | 0.06480 | 0.79835 |
| Iroko | 40 | 0.06233 | 0.82968 | 0.06258 | 0.79807 |
| Iroko | 45 | 0.06046 | 0.82982 | 0.05995 | 0.79804 |
| Iroko | 50 | 0.05884 | 0.83006 | 0.05979 | 0.79823 |
| Iroko | 55 | 0.05742 | 0.83034 | 0.05651 | 0.79853 |
| Iroko | 60 | 0.05617 | 0.83069 | 0.05628 | 0.79896 |
| Iroko | 65 | 0.05510 | 0.83132 | 0.05554 | 0.79993 |
| Iroko | 70 | 0.05411 | 0.83158 | 0.05446 | 0.80031 |
| Iroko | 75 | 0.05326 | 0.83194 | 0.05497 | 0.80091 |
| Iroko | 80 | 0.05250 | 0.83227 | 0.05458 | 0.80154 |
| Iroko | 85 | 0.05182 | 0.83260 | 0.05416 | 0.80212 |
| Iroko | 90 | 0.05123 | 0.83293 | 0.05262 | 0.80287 |
| Iroko | 95 | 0.05069 | 0.83311 | 0.05195 | 0.80333 |
| Iroko | 100 | 0.05022 | 0.83316 | 0.05195 | 0.80344 |
| Iroko | 105 | 0.04980 | 0.83323 | 0.05082 | 0.80362 |
| Iroko | 110 | 0.04942 | 0.83335 | 0.05080 | 0.80397 |
| Iroko | 115 | 0.04910 | 0.83344 | 0.05149 | 0.80428 |
| Iroko | 120 | 0.04880 | 0.83356 | 0.05138 | 0.80468 |
| Iroko | 125 | 0.04854 | 0.83360 | 0.05108 | 0.80485 |
| Iroko | 130 | 0.04831 | 0.83370 | 0.04926 | 0.80514 |
| Iroko | 135 | 0.04810 | 0.83375 | 0.04962 | 0.80550 |
| Iroko | 140 | 0.04791 | 0.83381 | 0.04980 | 0.80574 |
| Iroko | 145 | 0.04772 | 0.83398 | 0.04893 | 0.80628 |
| Iroko | 150 | 0.04756 | 0.83410 | 0.04913 | 0.80665 |
| Iroko | 155 | 0.04739 | 0.83431 | 0.04878 | 0.80717 |
| Iroko | 160 | 0.04725 | 0.83444 | 0.05009 | 0.80746 |
| Iroko | 165 | 0.04707 | 0.83481 | 0.04909 | 0.80810 |
| Iroko | 170 | 0.04689 | 0.83521 | 0.04944 | 0.80866 |
| Iroko | 175 | 0.04678 | 0.83530 | 0.04781 | 0.80874 |
| Iroko | 180 | 0.04667 | 0.83538 | 0.04808 | 0.80881 |
| Iroko | 185 | 0.04655 | 0.83559 | 0.04806 | 0.80903 |
| Iroko | 190 | 0.04648 | 0.83556 | 0.04859 | 0.80896 |
| Iroko | 195 | 0.04637 | 0.83574 | 0.04794 | 0.80909 |
| Iroko | 200 | 0.04624 | 0.83608 | 0.04884 | 0.80936 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample | Time | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|--------|------|--|---|---|------------------------------------|
| Iroko | 205 | 0.04607 | 0.83662 | 0.04969 | 0.80976 |
| Iroko | 210 | 0.04598 | 0.83677 | 0.04906 | 0.80981 |
| Iroko | 215 | 0.04585 | 0.83715 | 0.04994 | 0.81004 |
| Iroko | 220 | 0.04572 | 0.83753 | 0.04807 | 0.81025 |
| Iroko | 225 | 0.04566 | 0.83756 | 0.04791 | 0.81020 |
| Iroko | 230 | 0.04561 | 0.83755 | 0.04850 | 0.81013 |
| Iroko | 235 | 0.04548 | 0.83800 | 0.04840 | 0.81036 |
| Iroko | 240 | 0.04539 | 0.83823 | 0.04799 | 0.81044 |
| Iroko | 245 | 0.04528 | 0.83857 | 0.04860 | 0.81058 |
| Iroko | 250 | 0.04514 | 0.83912 | 0.04810 | 0.81084 |
| Iroko | 255 | 0.04505 | 0.83938 | 0.04826 | 0.81094 |
| Iroko | 260 | 0.04502 | 0.83931 | 0.04837 | 0.81083 |
| Iroko | 265 | 0.04502 | 0.83906 | 0.04843 | 0.81062 |
| Iroko | 270 | 0.04498 | 0.83910 | 0.04818 | 0.81058 |
| Iroko | 275 | 0.04494 | 0.83912 | 0.04822 | 0.81053 |
| Iroko | 280 | 0.04488 | 0.83924 | 0.04727 | 0.81055 |
| Iroko | 285 | 0.04486 | 0.83914 | 0.04751 | 0.81043 |
| Iroko | 290 | 0.04486 | 0.83895 | 0.04760 | 0.81025 |
| Iroko | 295 | 0.04482 | 0.83898 | 0.04743 | 0.81021 |
| Iroko | 300 | 0.04475 | 0.83919 | 0.04775 | 0.81028 |
| Iroko | 305 | 0.04472 | 0.83915 | 0.04724 | 0.81020 |
| Iroko | 310 | 0.04466 | 0.83935 | 0.04715 | 0.81028 |
| Iroko | 315 | 0.04461 | 0.83948 | 0.04796 | 0.81033 |
| Iroko | 320 | 0.04458 | 0.83947 | 0.04699 | 0.81027 |
| Iroko | 325 | 0.04454 | 0.83949 | 0.04693 | 0.81025 |
| Iroko | 330 | 0.04450 | 0.83961 | 0.04716 | 0.81029 |
| Iroko | 335 | 0.04446 | 0.83967 | 0.04695 | 0.81030 |
| Iroko | 340 | 0.04444 | 0.83962 | 0.04619 | 0.81022 |
| Iroko | 345 | 0.04444 | 0.83948 | 0.04609 | 0.81009 |
| Iroko | 350 | 0.04441 | 0.83953 | 0.04601 | 0.81010 |
| Iroko | 355 | 0.04440 | 0.83939 | 0.04765 | 0.80996 |
| Iroko | 360 | 0.04438 | 0.83933 | 0.04630 | 0.80989 |
| Iroko | 365 | 0.04435 | 0.83945 | 0.04594 | 0.80997 |
| Iroko | 370 | 0.04433 | 0.83938 | 0.04658 | 0.80990 |
| Iroko | 375 | 0.04434 | 0.83916 | 0.04700 | 0.80967 |
| Iroko | 380 | 0.04433 | 0.83907 | 0.04698 | 0.80956 |
| Iroko | 385 | 0.04432 | 0.83897 | 0.04776 | 0.80945 |
| Iroko | 390 | 0.04432 | 0.83877 | 0.04751 | 0.80927 |
| Iroko | 395 | 0.04431 | 0.83866 | 0.04623 | 0.80914 |
| Iroko | 400 | 0.04433 | 0.83832 | 0.04676 | 0.80882 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample | Time | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|--------|------|--|---|---|------------------------------------|
| Iroko | 405 | 0.04431 | 0.83832 | 0.04789 | 0.80879 |
| Iroko | 410 | 0.04430 | 0.83821 | 0.04830 | 0.80867 |
| Iroko | 415 | 0.04431 | 0.83801 | 0.04842 | 0.80846 |
| Iroko | 420 | 0.04435 | 0.83752 | 0.04829 | 0.80801 |
| Iroko | 425 | 0.04437 | 0.83722 | 0.04809 | 0.80773 |
| Iroko | 430 | 0.04439 | 0.83696 | 0.04811 | 0.80747 |
| Iroko | 435 | 0.04442 | 0.83663 | 0.04831 | 0.80716 |
| Iroko | 440 | 0.04443 | 0.83639 | 0.04935 | 0.80694 |
| Iroko | 445 | 0.04448 | 0.83592 | 0.04918 | 0.80656 |
| Iroko | 450 | 0.04450 | 0.83562 | 0.04882 | 0.80629 |
| Iroko | 455 | 0.04452 | 0.83540 | 0.04864 | 0.80608 |
| Iroko | 460 | 0.04460 | 0.83474 | 0.04970 | 0.80556 |
| Iroko | 465 | 0.04467 | 0.83419 | 0.05022 | 0.80515 |
| Iroko | 470 | 0.04475 | 0.83351 | 0.04947 | 0.80468 |
| Iroko | 475 | 0.04486 | 0.83266 | 0.05014 | 0.80410 |
| Iroko | 480 | 0.04489 | 0.83223 | 0.05050 | 0.80379 |
| Iroko | 485 | 0.04491 | 0.83184 | 0.04947 | 0.80353 |
| Iroko | 490 | 0.04499 | 0.83097 | 0.04955 | 0.80300 |
| Iroko | 495 | 0.04507 | 0.83001 | 0.05028 | 0.80245 |
| Iroko | 500 | 0.04511 | 0.82912 | 0.05078 | 0.80195 |
| Iroko | 505 | 0.04512 | 0.82839 | 0.05040 | 0.80160 |
| Iroko | 510 | 0.04511 | 0.82756 | 0.05143 | 0.80121 |
| Iroko | 515 | 0.04509 | 0.82619 | 0.04921 | 0.80063 |
| Iroko | 520 | 0.04503 | 0.82452 | 0.05102 | 0.79999 |
| Iroko | 525 | 0.04494 | 0.82332 | 0.05150 | 0.79959 |
| Iroko | 530 | 0.04478 | 0.82121 | 0.05100 | 0.79890 |
| Iroko | 535 | 0.04453 | 0.81836 | 0.05178 | 0.79798 |
| Iroko | 540 | 0.04430 | 0.81610 | 0.05120 | 0.79722 |
| Iroko | 545 | 0.04411 | 0.81414 | 0.05197 | 0.79649 |
| Iroko | 550 | 0.04396 | 0.81251 | 0.05145 | 0.79575 |
| Iroko | 555 | 0.04387 | 0.81122 | 0.05222 | 0.79503 |
| Iroko | 560 | 0.04382 | 0.81008 | 0.05097 | 0.79424 |
| Iroko | 565 | 0.04381 | 0.80921 | 0.05200 | 0.79352 |
| Iroko | 570 | 0.04385 | 0.80819 | 0.05247 | 0.79248 |
| Iroko | 575 | 0.04391 | 0.80739 | 0.05260 | 0.79165 |
| Iroko | 580 | 0.04403 | 0.80642 | 0.05253 | 0.79060 |
| Iroko | 585 | 0.04419 | 0.80536 | 0.05220 | 0.78954 |
| Iroko | 590 | 0.04435 | 0.80432 | 0.05122 | 0.78861 |
| Iroko | 595 | 0.04454 | 0.80318 | 0.05218 | 0.78766 |
| Iroko | 600 | 0.04483 | 0.80154 | 0.05184 | 0.78641 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Iroko | 605 | 0.04500 | 0.80053 | 0.05293 | 0.78571 |
| Iroko | 610 | 0.04525 | 0.79917 | 0.05247 | 0.78480 |
| Iroko | 615 | 0.04549 | 0.79778 | 0.05341 | 0.78391 |
| Iroko | 620 | 0.04581 | 0.79605 | 0.05416 | 0.78286 |
| Iroko | 625 | 0.04614 | 0.79422 | 0.05404 | 0.78178 |
| Iroko | 630 | 0.04665 | 0.79156 | 0.05598 | 0.78026 |
| Iroko | 635 | 0.04709 | 0.78921 | 0.05540 | 0.77891 |
| Iroko | 640 | 0.04753 | 0.78690 | 0.05512 | 0.77755 |
| Iroko | 645 | 0.04793 | 0.78486 | 0.05497 | 0.77628 |
| Iroko | 650 | 0.04817 | 0.78359 | 0.05442 | 0.77544 |
| Iroko | 655 | 0.04848 | 0.78200 | 0.05562 | 0.77435 |
| Iroko | 660 | 0.04880 | 0.78039 | 0.05621 | 0.77314 |
| Iroko | 665 | 0.04914 | 0.77877 | 0.05605 | 0.77175 |
| Iroko | 670 | 0.04940 | 0.77754 | 0.05599 | 0.77053 |
| Iroko | 675 | 0.04968 | 0.77630 | 0.05538 | 0.76902 |
| Iroko | 680 | 0.04986 | 0.77548 | 0.05666 | 0.76772 |
| Iroko | 685 | 0.05001 | 0.77479 | 0.05634 | 0.76627 |
| Iroko | 690 | 0.05008 | 0.77429 | 0.05805 | 0.76479 |
| Iroko | 695 | 0.05006 | 0.77380 | 0.05693 | 0.76299 |
| Iroko | 700 | 0.04991 | 0.77325 | 0.05798 | 0.76136 |
| Iroko | 705 | 0.04961 | 0.77237 | 0.05795 | 0.75984 |
| Iroko | 710 | 0.04915 | 0.77085 | 0.05799 | 0.75830 |
| Iroko | 715 | 0.04858 | 0.76886 | 0.05797 | 0.75694 |
| Iroko | 720 | 0.04806 | 0.76732 | 0.05675 | 0.75604 |
| Iroko | 725 | 0.04754 | 0.76596 | 0.05595 | 0.75529 |
| Iroko | 730 | 0.04695 | 0.76444 | 0.05684 | 0.75452 |
| Iroko | 735 | 0.04630 | 0.76284 | 0.05763 | 0.75373 |
| Iroko | 740 | 0.04540 | 0.76028 | 0.05871 | 0.75262 |
| Iroko | 745 | 0.04458 | 0.75838 | 0.05872 | 0.75168 |
| Iroko | 750 | 0.04367 | 0.75641 | 0.05855 | 0.75051 |
| Iroko | 755 | 0.04302 | 0.75566 | 0.05807 | 0.74975 |
| Iroko | 760 | 0.04245 | 0.75528 | 0.05962 | 0.74910 |
| Iroko | 765 | 0.04191 | 0.75497 | 0.05830 | 0.74829 |
| Iroko | 770 | 0.04150 | 0.75518 | 0.05739 | 0.74822 |
| Iroko | 775 | 0.04125 | 0.75614 | 0.05473 | 0.74886 |
| Iroko | 780 | 0.04145 | 0.75897 | 0.05213 | 0.75006 |
| Iroko | 785 | 0.04269 | 0.76537 | 0.05031 | 0.75205 |
| Iroko | 790 | 0.04499 | 0.77266 | 0.04742 | 0.75487 |
| Iroko | 795 | 0.04743 | 0.77516 | 0.04373 | 0.75854 |
| Iroko | 800 | 0.04878 | 0.77461 | 0.03971 | 0.76259 |

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| Sample | Time | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|--------|------|--|---|---|------------------------------------|
| Iroko | 805 | 0.04896 | 0.77571 | 0.03776 | 0.76682 |
| Iroko | 810 | 0.04830 | 0.77936 | 0.03636 | 0.77078 |
| Iroko | 815 | 0.04727 | 0.78432 | 0.03618 | 0.77427 |
| Iroko | 820 | 0.04627 | 0.78896 | 0.03617 | 0.77713 |
| Iroko | 825 | 0.04528 | 0.79353 | 0.03702 | 0.78017 |
| Iroko | 830 | 0.04468 | 0.79637 | 0.03618 | 0.78273 |
| Iroko | 835 | 0.04438 | 0.79799 | 0.03620 | 0.78513 |
| Iroko | 840 | 0.04419 | 0.79921 | 0.03446 | 0.78747 |
| Iroko | 845 | 0.04378 | 0.80148 | 0.03465 | 0.78977 |
| Iroko | 850 | 0.04307 | 0.80491 | 0.03486 | 0.79168 |
| Iroko | 855 | 0.04218 | 0.80907 | 0.03445 | 0.79347 |
| Iroko | 860 | 0.04131 | 0.81298 | 0.03448 | 0.79526 |
| Iroko | 865 | 0.04067 | 0.81589 | 0.03473 | 0.79702 |
| Iroko | 870 | 0.04030 | 0.81765 | 0.03557 | 0.79855 |
| Iroko | 875 | 0.04011 | 0.81907 | 0.03548 | 0.80005 |
| Iroko | 880 | 0.04007 | 0.82036 | 0.03507 | 0.80131 |
| Iroko | 885 | 0.04016 | 0.82224 | 0.03584 | 0.80264 |
| Iroko | 890 | 0.04047 | 0.82521 | 0.03681 | 0.80405 |
| Iroko | 895 | 0.04092 | 0.82879 | 0.03647 | 0.80530 |
| Iroko | 900 | 0.04147 | 0.83291 | 0.03583 | 0.80648 |
| Iroko | 905 | 0.04198 | 0.83681 | 0.03629 | 0.80753 |
| Iroko | 910 | 0.04233 | 0.83966 | 0.03647 | 0.80834 |
| Iroko | 915 | 0.04263 | 0.84231 | 0.03658 | 0.80918 |
| Iroko | 920 | 0.04285 | 0.84456 | 0.03642 | 0.81001 |
| Iroko | 925 | 0.04296 | 0.84623 | 0.03637 | 0.81079 |
| Iroko | 930 | 0.04302 | 0.84780 | 0.03795 | 0.81181 |
| Iroko | 935 | 0.04298 | 0.84867 | 0.03677 | 0.81266 |
| Iroko | 940 | 0.04286 | 0.84921 | 0.03807 | 0.81357 |
| Iroko | 945 | 0.04272 | 0.84935 | 0.03741 | 0.81419 |
| Iroko | 950 | 0.04255 | 0.84937 | 0.03743 | 0.81485 |
| Iroko | 955 | 0.04240 | 0.84928 | 0.03741 | 0.81530 |
| Iroko | 960 | 0.04224 | 0.84915 | 0.03774 | 0.81572 |
| Iroko | 965 | 0.04205 | 0.84897 | 0.03826 | 0.81635 |
| Iroko | 970 | 0.04190 | 0.84878 | 0.03749 | 0.81672 |
| Iroko | 975 | 0.04171 | 0.84854 | 0.03795 | 0.81735 |
| Iroko | 980 | 0.04154 | 0.84829 | 0.03895 | 0.81787 |
| Iroko | 985 | 0.04138 | 0.84804 | 0.03843 | 0.81838 |
| Iroko | 990 | 0.04122 | 0.84779 | 0.03772 | 0.81886 |
| Iroko | 995 | 0.04107 | 0.84753 | 0.03844 | 0.81938 |
| Iroko | 1000 | 0.04095 | 0.84733 | 0.03947 | 0.81972 |

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| Sample | Time | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|--------|------|--|---|---|------------------------------------|
| Iroko | 1005 | 0.04083 | 0.84711 | 0.03991 | 0.82011 |
| Iroko | 1010 | 0.04073 | 0.84694 | 0.04051 | 0.82038 |
| Iroko | 1015 | 0.04065 | 0.84679 | 0.04088 | 0.82058 |
| Iroko | 1020 | 0.04055 | 0.84660 | 0.04003 | 0.82099 |
| Iroko | 1025 | 0.04046 | 0.84642 | 0.04051 | 0.82138 |
| Iroko | 1030 | 0.04036 | 0.84622 | 0.04070 | 0.82184 |
| Iroko | 1035 | 0.04027 | 0.84602 | 0.04039 | 0.82238 |
| Iroko | 1040 | 0.04020 | 0.84586 | 0.04023 | 0.82275 |
| Iroko | 1045 | 0.04015 | 0.84574 | 0.04139 | 0.82304 |
| Iroko | 1050 | 0.04010 | 0.84563 | 0.04165 | 0.82332 |
| Iroko | 1055 | 0.04006 | 0.84551 | 0.04150 | 0.82364 |
| Iroko | 1060 | 0.04001 | 0.84539 | 0.04228 | 0.82400 |
| Iroko | 1065 | 0.03999 | 0.84533 | 0.04207 | 0.82414 |
| Iroko | 1070 | 0.03996 | 0.84524 | 0.04247 | 0.82438 |
| Iroko | 1075 | 0.03993 | 0.84515 | 0.04291 | 0.82469 |
| Iroko | 1080 | 0.03991 | 0.84505 | 0.04308 | 0.82506 |
| Iroko | 1085 | 0.03989 | 0.84501 | 0.04288 | 0.82521 |
| Iroko | 1090 | 0.03989 | 0.84497 | 0.04300 | 0.82538 |
| Iroko | 1095 | 0.03988 | 0.84490 | 0.04252 | 0.82568 |
| Iroko | 1100 | 0.03987 | 0.84481 | 0.04314 | 0.82605 |
| Iroko | 1105 | 0.03987 | 0.84470 | 0.04281 | 0.82648 |
| Iroko | 1110 | 0.03987 | 0.84470 | 0.04368 | 0.82658 |
| Iroko | 1115 | 0.03988 | 0.84464 | 0.04337 | 0.82688 |
| Iroko | 1120 | 0.03989 | 0.84464 | 0.04259 | 0.82703 |
| Iroko | 1125 | 0.03991 | 0.84464 | 0.04277 | 0.82715 |
| Iroko | 1130 | 0.03993 | 0.84465 | 0.04386 | 0.82729 |
| Iroko | 1135 | 0.03995 | 0.84465 | 0.04328 | 0.82747 |
| Iroko | 1140 | 0.03997 | 0.84464 | 0.04333 | 0.82767 |
| Iroko | 1145 | 0.04000 | 0.84465 | 0.04406 | 0.82787 |
| Iroko | 1150 | 0.04003 | 0.84469 | 0.04284 | 0.82796 |
| Iroko | 1155 | 0.04006 | 0.84475 | 0.04301 | 0.82803 |
| Iroko | 1160 | 0.04010 | 0.84473 | 0.04370 | 0.82834 |
| Iroko | 1165 | 0.04014 | 0.84475 | 0.04319 | 0.82853 |
| Iroko | 1170 | 0.04019 | 0.84471 | 0.04476 | 0.82891 |
| Iroko | 1175 | 0.04024 | 0.84469 | 0.04566 | 0.82928 |
| Iroko | 1180 | 0.04029 | 0.84475 | 0.04645 | 0.82943 |
| Iroko | 1185 | 0.04034 | 0.84487 | 0.04645 | 0.82938 |
| Iroko | 1190 | 0.04040 | 0.84489 | 0.04596 | 0.82968 |
| Iroko | 1195 | 0.04047 | 0.84492 | 0.04513 | 0.83003 |
| Iroko | 1200 | 0.04053 | 0.84500 | 0.04518 | 0.83014 |

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| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Iroko | 1205 | 0.04060 | 0.84510 | 0.04565 | 0.83026 |
| Iroko | 1210 | 0.04066 | 0.84521 | 0.04697 | 0.83034 |
| Iroko | 1215 | 0.04075 | 0.84527 | 0.04709 | 0.83070 |
| Iroko | 1220 | 0.04082 | 0.84540 | 0.04837 | 0.83070 |
| Iroko | 1225 | 0.04089 | 0.84553 | 0.04607 | 0.83074 |
| Iroko | 1230 | 0.04096 | 0.84568 | 0.04517 | 0.83068 |
| Iroko | 1235 | 0.04104 | 0.84578 | 0.04397 | 0.83087 |
| Iroko | 1240 | 0.04112 | 0.84592 | 0.04440 | 0.83094 |
| Iroko | 1245 | 0.04121 | 0.84604 | 0.04562 | 0.83107 |
| Iroko | 1250 | 0.04130 | 0.84618 | 0.04568 | 0.83113 |
| Iroko | 1255 | 0.04140 | 0.84629 | 0.04713 | 0.83134 |
| Iroko | 1260 | 0.04150 | 0.84642 | 0.04837 | 0.83159 |
| Iroko | 1265 | 0.04161 | 0.84655 | 0.04720 | 0.83176 |
| Iroko | 1270 | 0.04169 | 0.84668 | 0.04688 | 0.83172 |
| Iroko | 1275 | 0.04178 | 0.84681 | 0.04600 | 0.83183 |
| Iroko | 1280 | 0.04190 | 0.84695 | 0.04626 | 0.83207 |
| Iroko | 1285 | 0.04201 | 0.84709 | 0.04657 | 0.83223 |
| Iroko | 1290 | 0.04210 | 0.84720 | 0.04851 | 0.83224 |
| Iroko | 1295 | 0.04221 | 0.84733 | 0.04897 | 0.83240 |
| Iroko | 1300 | 0.04231 | 0.84744 | 0.04829 | 0.83249 |
| Iroko | 1305 | 0.04239 | 0.84750 | 0.04816 | 0.83245 |
| Iroko | 1310 | 0.04247 | 0.84757 | 0.04638 | 0.83243 |
| Iroko | 1315 | 0.04257 | 0.84766 | 0.04759 | 0.83253 |
| Iroko | 1320 | 0.04266 | 0.84771 | 0.04874 | 0.83255 |
| Iroko | 1325 | 0.04274 | 0.84776 | 0.05012 | 0.83258 |
| Iroko | 1330 | 0.04283 | 0.84780 | 0.04940 | 0.83261 |
| Iroko | 1335 | 0.04292 | 0.84783 | 0.04912 | 0.83268 |
| Iroko | 1340 | 0.04304 | 0.84788 | 0.04891 | 0.83286 |
| Iroko | 1345 | 0.04317 | 0.84795 | 0.04866 | 0.83307 |
| Iroko | 1350 | 0.04324 | 0.84793 | 0.04990 | 0.83306 |
| Iroko | 1355 | 0.04332 | 0.84790 | 0.04957 | 0.83310 |
| Iroko | 1360 | 0.04344 | 0.84793 | 0.05028 | 0.83326 |
| Iroko | 1365 | 0.04353 | 0.84791 | 0.04935 | 0.83335 |
| Iroko | 1370 | 0.04362 | 0.84787 | 0.04942 | 0.83341 |
| Iroko | 1375 | 0.04374 | 0.84790 | 0.05036 | 0.83358 |
| Iroko | 1380 | 0.04383 | 0.84785 | 0.05028 | 0.83365 |
| Iroko | 1385 | 0.04398 | 0.84793 | 0.05179 | 0.83388 |
| Iroko | 1390 | 0.04403 | 0.84775 | 0.05120 | 0.83383 |
| Iroko | 1395 | 0.04416 | 0.84778 | 0.05107 | 0.83400 |
| Iroko | 1400 | 0.04421 | 0.84761 | 0.05121 | 0.83398 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Iroko | 1405 | 0.04431 | 0.84754 | 0.05012 | 0.83407 |
| Iroko | 1410 | 0.04441 | 0.84747 | 0.05055 | 0.83416 |
| Iroko | 1415 | 0.04448 | 0.84731 | 0.05171 | 0.83418 |
| Iroko | 1420 | 0.04462 | 0.84735 | 0.05231 | 0.83436 |
| Iroko | 1425 | 0.04462 | 0.84700 | 0.05267 | 0.83425 |
| Iroko | 1430 | 0.04466 | 0.84676 | 0.05254 | 0.83422 |
| Iroko | 1435 | 0.04460 | 0.84639 | 0.04938 | 0.83399 |
| Iroko | 1440 | 0.04464 | 0.84618 | 0.04842 | 0.83397 |
| Iroko | 1445 | 0.04471 | 0.84602 | 0.04951 | 0.83403 |
| Iroko | 1450 | 0.04479 | 0.84586 | 0.04720 | 0.83409 |
| Iroko | 1455 | 0.04497 | 0.84584 | 0.05005 | 0.83436 |
| Iroko | 1460 | 0.04496 | 0.84555 | 0.04999 | 0.83424 |
| Iroko | 1465 | 0.04509 | 0.84546 | 0.05058 | 0.83440 |
| Iroko | 1470 | 0.04518 | 0.84530 | 0.05137 | 0.83448 |
| Iroko | 1475 | 0.04529 | 0.84518 | 0.05293 | 0.83458 |
| Iroko | 1480 | 0.04537 | 0.84501 | 0.05092 | 0.83463 |
| Iroko | 1485 | 0.04551 | 0.84495 | 0.04901 | 0.83478 |
| Iroko | 1490 | 0.04567 | 0.84498 | 0.05007 | 0.83497 |
| Iroko | 1495 | 0.04579 | 0.84490 | 0.05202 | 0.83508 |
| Iroko | 1500 | 0.04573 | 0.84444 | 0.05132 | 0.83492 |
| Iroko | 1505 | 0.04573 | 0.84414 | 0.04999 | 0.83486 |
| Iroko | 1510 | 0.04571 | 0.84384 | 0.05040 | 0.83476 |
| Iroko | 1515 | 0.04570 | 0.84359 | 0.05089 | 0.83470 |
| Iroko | 1520 | 0.04567 | 0.84336 | 0.05020 | 0.83459 |
| Iroko | 1525 | 0.04580 | 0.84323 | 0.05191 | 0.83473 |
| Iroko | 1530 | 0.04588 | 0.84309 | 0.05129 | 0.83479 |
| Iroko | 1535 | 0.04599 | 0.84297 | 0.05148 | 0.83488 |
| Iroko | 1540 | 0.04603 | 0.84280 | 0.05011 | 0.83489 |
| Iroko | 1545 | 0.04603 | 0.84260 | 0.05182 | 0.83483 |
| Iroko | 1550 | 0.04612 | 0.84248 | 0.05263 | 0.83490 |
| Iroko | 1555 | 0.04625 | 0.84239 | 0.05266 | 0.83503 |
| Iroko | 1560 | 0.04622 | 0.84220 | 0.05100 | 0.83495 |
| Iroko | 1565 | 0.04632 | 0.84209 | 0.05097 | 0.83502 |
| Iroko | 1570 | 0.04636 | 0.84196 | 0.05137 | 0.83503 |
| Iroko | 1575 | 0.04649 | 0.84189 | 0.05282 | 0.83514 |
| Iroko | 1580 | 0.04658 | 0.84180 | 0.05255 | 0.83521 |
| Iroko | 1585 | 0.04681 | 0.84190 | 0.05500 | 0.83544 |
| Iroko | 1590 | 0.04693 | 0.84187 | 0.05584 | 0.83552 |
| Iroko | 1595 | 0.04702 | 0.84183 | 0.05400 | 0.83558 |
| Iroko | 1600 | 0.04715 | 0.84185 | 0.05130 | 0.83568 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Iroko | 1605 | 0.04720 | 0.84176 | 0.05238 | 0.83570 |
| Iroko | 1610 | 0.04718 | 0.84154 | 0.05111 | 0.83563 |
| Iroko | 1615 | 0.04732 | 0.84160 | 0.05258 | 0.83574 |
| Iroko | 1620 | 0.04733 | 0.84145 | 0.05179 | 0.83571 |
| Iroko | 1625 | 0.04720 | 0.84115 | 0.05048 | 0.83555 |
| Iroko | 1630 | 0.04724 | 0.84108 | 0.05215 | 0.83555 |
| Iroko | 1635 | 0.04728 | 0.84100 | 0.05368 | 0.83555 |
| Iroko | 1640 | 0.04758 | 0.84125 | 0.05379 | 0.83582 |
| Iroko | 1645 | 0.04766 | 0.84122 | 0.05449 | 0.83585 |
| Iroko | 1650 | 0.04766 | 0.84110 | 0.05270 | 0.83581 |
| Iroko | 1655 | 0.04763 | 0.84094 | 0.05465 | 0.83576 |
| Iroko | 1660 | 0.04764 | 0.84084 | 0.05484 | 0.83573 |
| Iroko | 1665 | 0.04772 | 0.84083 | 0.05465 | 0.83577 |
| Iroko | 1670 | 0.04771 | 0.84072 | 0.05147 | 0.83574 |
| Iroko | 1675 | 0.04766 | 0.84060 | 0.05091 | 0.83564 |
| Iroko | 1680 | 0.04782 | 0.84063 | 0.05126 | 0.83577 |
| Iroko | 1685 | 0.04781 | 0.84054 | 0.05332 | 0.83572 |
| Iroko | 1690 | 0.04771 | 0.84041 | 0.05105 | 0.83560 |
| Iroko | 1695 | 0.04793 | 0.84043 | 0.05190 | 0.83576 |
| Iroko | 1700 | 0.04788 | 0.84032 | 0.04976 | 0.83567 |
| Iroko | 1705 | 0.04790 | 0.84025 | 0.04824 | 0.83567 |
| Iroko | 1710 | 0.04817 | 0.84030 | 0.04752 | 0.83588 |
| Iroko | 1715 | 0.04836 | 0.84034 | 0.05038 | 0.83602 |
| Iroko | 1720 | 0.04834 | 0.84017 | 0.05128 | 0.83596 |
| Iroko | 1725 | 0.04850 | 0.84018 | 0.05410 | 0.83607 |
| Iroko | 1730 | 0.04846 | 0.83997 | 0.05329 | 0.83599 |
| Iroko | 1735 | 0.04869 | 0.84004 | 0.05337 | 0.83617 |
| Iroko | 1740 | 0.04887 | 0.84009 | 0.05344 | 0.83628 |
| Iroko | 1745 | 0.04885 | 0.83982 | 0.05267 | 0.83623 |
| Iroko | 1750 | 0.04890 | 0.83965 | 0.05240 | 0.83623 |
| Iroko | 1755 | 0.04924 | 0.83995 | 0.05359 | 0.83647 |
| Iroko | 1760 | 0.04933 | 0.83982 | 0.05478 | 0.83651 |
| Iroko | 1765 | 0.04943 | 0.83971 | 0.05460 | 0.83656 |
| Iroko | 1770 | 0.04902 | 0.83871 | 0.05282 | 0.83618 |
| Iroko | 1775 | 0.04918 | 0.83858 | 0.05208 | 0.83627 |
| Iroko | 1780 | 0.04930 | 0.83841 | 0.04999 | 0.83633 |
| Iroko | 1785 | 0.04948 | 0.83831 | 0.05096 | 0.83644 |
| Iroko | 1790 | 0.04935 | 0.83772 | 0.05271 | 0.83630 |
| Iroko | 1795 | 0.04939 | 0.83737 | 0.05294 | 0.83629 |
| Iroko | 1800 | 0.04935 | 0.83691 | 0.05314 | 0.83621 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample | Time | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|--------|------|--|---|---|------------------------------------|
| Pine | 0 | 0.24656 | 0.85066 | 0.24520 | 0.86175 |
| Pine | 5 | 0.15979 | 0.85066 | 0.17842 | 0.85161 |
| Pine | 10 | 0.11252 | 0.84392 | 0.14313 | 0.84328 |
| Pine | 15 | 0.09142 | 0.83384 | 0.11681 | 0.83644 |
| Pine | 20 | 0.08053 | 0.83235 | 0.10317 | 0.83197 |
| Pine | 25 | 0.07405 | 0.83221 | 0.09358 | 0.82922 |
| Pine | 30 | 0.06941 | 0.83208 | 0.08535 | 0.82706 |
| Pine | 35 | 0.06596 | 0.83194 | 0.08048 | 0.82553 |
| Pine | 40 | 0.06332 | 0.83190 | 0.07424 | 0.82467 |
| Pine | 45 | 0.06124 | 0.83205 | 0.07168 | 0.82454 |
| Pine | 50 | 0.05949 | 0.83227 | 0.07074 | 0.82472 |
| Pine | 55 | 0.05790 | 0.83238 | 0.06778 | 0.82461 |
| Pine | 60 | 0.05659 | 0.83267 | 0.06685 | 0.82508 |
| Pine | 65 | 0.05539 | 0.83283 | 0.06700 | 0.82526 |
| Pine | 70 | 0.05435 | 0.83299 | 0.06336 | 0.82551 |
| Pine | 75 | 0.05344 | 0.83316 | 0.06147 | 0.82583 |
| Pine | 80 | 0.05265 | 0.83339 | 0.06031 | 0.82637 |
| Pine | 85 | 0.05198 | 0.83375 | 0.06059 | 0.82742 |
| Pine | 90 | 0.05136 | 0.83400 | 0.05981 | 0.82814 |
| Pine | 95 | 0.05080 | 0.83416 | 0.05996 | 0.82862 |
| Pine | 100 | 0.05028 | 0.83417 | 0.05925 | 0.82863 |
| Pine | 105 | 0.04983 | 0.83434 | 0.05993 | 0.82910 |
| Pine | 110 | 0.04943 | 0.83456 | 0.06004 | 0.82970 |
| Pine | 115 | 0.04907 | 0.83468 | 0.06003 | 0.82997 |
| Pine | 120 | 0.04875 | 0.83468 | 0.05867 | 0.82996 |
| Pine | 125 | 0.04846 | 0.83478 | 0.05866 | 0.83017 |
| Pine | 130 | 0.04819 | 0.83498 | 0.05823 | 0.83059 |
| Pine | 135 | 0.04792 | 0.83532 | 0.06008 | 0.83117 |
| Pine | 140 | 0.04771 | 0.83536 | 0.06002 | 0.83119 |
| Pine | 145 | 0.04755 | 0.83524 | 0.06136 | 0.83099 |
| Pine | 150 | 0.04736 | 0.83539 | 0.05913 | 0.83118 |
| Pine | 155 | 0.04719 | 0.83556 | 0.05782 | 0.83138 |
| Pine | 160 | 0.04708 | 0.83544 | 0.05600 | 0.83121 |
| Pine | 165 | 0.04691 | 0.83571 | 0.05491 | 0.83149 |
| Pine | 170 | 0.04673 | 0.83610 | 0.05518 | 0.83189 |
| Pine | 175 | 0.04663 | 0.83610 | 0.05558 | 0.83185 |
| Pine | 180 | 0.04651 | 0.83624 | 0.05623 | 0.83194 |
| Pine | 185 | 0.04642 | 0.83630 | 0.05665 | 0.83191 |
| Pine | 190 | 0.04630 | 0.83650 | 0.05663 | 0.83205 |
| Pine | 195 | 0.04628 | 0.83619 | 0.05756 | 0.83171 |
| Pine | 200 | 0.04621 | 0.83620 | 0.05672 | 0.83166 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Pine | 205 | 0.04616 | 0.83615 | 0.05626 | 0.83156 |
| Pine | 210 | 0.04603 | 0.83650 | 0.05623 | 0.83180 |
| Pine | 215 | 0.04599 | 0.83639 | 0.05580 | 0.83167 |
| Pine | 220 | 0.04596 | 0.83627 | 0.05713 | 0.83151 |
| Pine | 225 | 0.04605 | 0.83556 | 0.05745 | 0.83085 |
| Pine | 230 | 0.04607 | 0.83520 | 0.05810 | 0.83046 |
| Pine | 235 | 0.04599 | 0.83533 | 0.05677 | 0.83053 |
| Pine | 240 | 0.04604 | 0.83485 | 0.05660 | 0.83003 |
| Pine | 245 | 0.04610 | 0.83433 | 0.05715 | 0.82946 |
| Pine | 250 | 0.04615 | 0.83386 | 0.05809 | 0.82890 |
| Pine | 255 | 0.04626 | 0.83309 | 0.05806 | 0.82790 |
| Pine | 260 | 0.04624 | 0.83300 | 0.05926 | 0.82776 |
| Pine | 265 | 0.04628 | 0.83256 | 0.05711 | 0.82714 |
| Pine | 270 | 0.04629 | 0.83232 | 0.05831 | 0.82677 |
| Pine | 275 | 0.04637 | 0.83175 | 0.05765 | 0.82577 |
| Pine | 280 | 0.04641 | 0.83133 | 0.05597 | 0.82502 |
| Pine | 285 | 0.04644 | 0.83099 | 0.05810 | 0.82441 |
| Pine | 290 | 0.04648 | 0.83055 | 0.05560 | 0.82361 |
| Pine | 295 | 0.04651 | 0.83013 | 0.05527 | 0.82287 |
| Pine | 300 | 0.04648 | 0.83005 | 0.05445 | 0.82283 |
| Pine | 305 | 0.04645 | 0.83001 | 0.05578 | 0.82290 |
| Pine | 310 | 0.04643 | 0.82986 | 0.05707 | 0.82276 |
| Pine | 315 | 0.04643 | 0.82958 | 0.05535 | 0.82238 |
| Pine | 320 | 0.04643 | 0.82928 | 0.05556 | 0.82201 |
| Pine | 325 | 0.04643 | 0.82885 | 0.05487 | 0.82147 |
| Pine | 330 | 0.04643 | 0.82827 | 0.05419 | 0.82081 |
| Pine | 335 | 0.04641 | 0.82780 | 0.05388 | 0.82038 |
| Pine | 340 | 0.04637 | 0.82765 | 0.05375 | 0.82035 |
| Pine | 345 | 0.04634 | 0.82752 | 0.05315 | 0.82034 |
| Pine | 350 | 0.04630 | 0.82710 | 0.05306 | 0.82005 |
| Pine | 355 | 0.04626 | 0.82658 | 0.05367 | 0.81970 |
| Pine | 360 | 0.04620 | 0.82600 | 0.05409 | 0.81939 |
| Pine | 365 | 0.04614 | 0.82548 | 0.05524 | 0.81916 |
| Pine | 370 | 0.04607 | 0.82488 | 0.05528 | 0.81889 |
| Pine | 375 | 0.04599 | 0.82419 | 0.05490 | 0.81861 |
| Pine | 380 | 0.04585 | 0.82285 | 0.05412 | 0.81803 |
| Pine | 385 | 0.04571 | 0.82157 | 0.05442 | 0.81757 |
| Pine | 390 | 0.04551 | 0.81975 | 0.05446 | 0.81696 |
| Pine | 395 | 0.04547 | 0.81980 | 0.05515 | 0.81710 |
| Pine | 400 | 0.04536 | 0.81903 | 0.05650 | 0.81687 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Pine | 405 | 0.04523 | 0.81797 | 0.05505 | 0.81656 |
| Pine | 410 | 0.04505 | 0.81634 | 0.05620 | 0.81605 |
| Pine | 415 | 0.04493 | 0.81524 | 0.05699 | 0.81571 |
| Pine | 420 | 0.04476 | 0.81292 | 0.05498 | 0.81479 |
| Pine | 425 | 0.04469 | 0.81141 | 0.05481 | 0.81416 |
| Pine | 430 | 0.04464 | 0.81115 | 0.05544 | 0.81404 |
| Pine | 435 | 0.04459 | 0.81125 | 0.05652 | 0.81415 |
| Pine | 440 | 0.04457 | 0.81008 | 0.05569 | 0.81356 |
| Pine | 445 | 0.04457 | 0.80914 | 0.05533 | 0.81302 |
| Pine | 450 | 0.04459 | 0.80837 | 0.05632 | 0.81254 |
| Pine | 455 | 0.04451 | 0.80876 | 0.05711 | 0.81285 |
| Pine | 460 | 0.04456 | 0.80784 | 0.05702 | 0.81227 |
| Pine | 465 | 0.04469 | 0.80658 | 0.05634 | 0.81137 |
| Pine | 470 | 0.04481 | 0.80562 | 0.05634 | 0.81068 |
| Pine | 475 | 0.04491 | 0.80479 | 0.05739 | 0.81005 |
| Pine | 480 | 0.04508 | 0.80370 | 0.05731 | 0.80927 |
| Pine | 485 | 0.04526 | 0.80255 | 0.05695 | 0.80849 |
| Pine | 490 | 0.04542 | 0.80157 | 0.05723 | 0.80780 |
| Pine | 495 | 0.04560 | 0.80052 | 0.05749 | 0.80711 |
| Pine | 500 | 0.04583 | 0.79918 | 0.05728 | 0.80624 |
| Pine | 505 | 0.04591 | 0.79865 | 0.05748 | 0.80588 |
| Pine | 510 | 0.04613 | 0.79736 | 0.05646 | 0.80508 |
| Pine | 515 | 0.04628 | 0.79647 | 0.05667 | 0.80451 |
| Pine | 520 | 0.04630 | 0.79624 | 0.05728 | 0.80436 |
| Pine | 525 | 0.04649 | 0.79513 | 0.05782 | 0.80366 |
| Pine | 530 | 0.04675 | 0.79371 | 0.05699 | 0.80280 |
| Pine | 535 | 0.04694 | 0.79262 | 0.05802 | 0.80213 |
| Pine | 540 | 0.04710 | 0.79173 | 0.05796 | 0.80159 |
| Pine | 545 | 0.04718 | 0.79118 | 0.05808 | 0.80124 |
| Pine | 550 | 0.04739 | 0.79002 | 0.05807 | 0.80052 |
| Pine | 555 | 0.04763 | 0.78871 | 0.05829 | 0.79970 |
| Pine | 560 | 0.04784 | 0.78760 | 0.05811 | 0.79899 |
| Pine | 565 | 0.04807 | 0.78639 | 0.05798 | 0.79819 |
| Pine | 570 | 0.04818 | 0.78573 | 0.06011 | 0.79773 |
| Pine | 575 | 0.04839 | 0.78462 | 0.05816 | 0.79696 |
| Pine | 580 | 0.04865 | 0.78336 | 0.05852 | 0.79604 |
| Pine | 585 | 0.04894 | 0.78199 | 0.05964 | 0.79496 |
| Pine | 590 | 0.04928 | 0.78047 | 0.06054 | 0.79362 |
| Pine | 595 | 0.04967 | 0.77888 | 0.05903 | 0.79197 |
| Pine | 600 | 0.04985 | 0.77813 | 0.05812 | 0.79107 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample | Time | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|--------|------|--|---|---|------------------------------------|
| (-) | (s) | | | | |
| Pine | 605 | 0.04996 | 0.77762 | 0.06014 | 0.79042 |
| Pine | 610 | 0.05013 | 0.77694 | 0.06115 | 0.78941 |
| Pine | 615 | 0.05034 | 0.77620 | 0.06103 | 0.78807 |
| Pine | 620 | 0.05050 | 0.77562 | 0.06135 | 0.78686 |
| Pine | 625 | 0.05054 | 0.77534 | 0.06079 | 0.78630 |
| Pine | 630 | 0.05062 | 0.77488 | 0.06007 | 0.78526 |
| Pine | 635 | 0.05065 | 0.77454 | 0.05993 | 0.78455 |
| Pine | 640 | 0.05067 | 0.77405 | 0.06005 | 0.78359 |
| Pine | 645 | 0.05064 | 0.77378 | 0.06122 | 0.78310 |
| Pine | 650 | 0.05061 | 0.77334 | 0.05964 | 0.78239 |
| Pine | 655 | 0.05055 | 0.77285 | 0.05862 | 0.78168 |
| Pine | 660 | 0.05049 | 0.77312 | 0.05984 | 0.78192 |
| Pine | 665 | 0.05042 | 0.77301 | 0.05790 | 0.78168 |
| Pine | 670 | 0.05035 | 0.77311 | 0.05627 | 0.78172 |
| Pine | 675 | 0.05029 | 0.77337 | 0.05720 | 0.78208 |
| Pine | 680 | 0.05023 | 0.77364 | 0.05577 | 0.78257 |
| Pine | 685 | 0.05018 | 0.77391 | 0.05488 | 0.78336 |
| Pine | 690 | 0.05008 | 0.77429 | 0.05346 | 0.78486 |
| Pine | 695 | 0.04991 | 0.77477 | 0.05318 | 0.78649 |
| Pine | 700 | 0.04964 | 0.77569 | 0.05210 | 0.78838 |
| Pine | 705 | 0.04927 | 0.77711 | 0.05007 | 0.79027 |
| Pine | 710 | 0.04883 | 0.77896 | 0.04799 | 0.79208 |
| Pine | 715 | 0.04823 | 0.78173 | 0.04628 | 0.79423 |
| Pine | 720 | 0.04744 | 0.78548 | 0.04495 | 0.79667 |
| Pine | 725 | 0.04667 | 0.78917 | 0.04291 | 0.79887 |
| Pine | 730 | 0.04559 | 0.79438 | 0.04094 | 0.80204 |
| Pine | 735 | 0.04475 | 0.79843 | 0.03934 | 0.80496 |
| Pine | 740 | 0.04415 | 0.80146 | 0.03622 | 0.80828 |
| Pine | 745 | 0.04385 | 0.80319 | 0.03375 | 0.81131 |
| Pine | 750 | 0.04323 | 0.80660 | 0.03157 | 0.81479 |
| Pine | 755 | 0.04206 | 0.81270 | 0.03097 | 0.81801 |
| Pine | 760 | 0.04128 | 0.81815 | 0.03071 | 0.82071 |
| Pine | 765 | 0.04125 | 0.82278 | 0.03009 | 0.82307 |
| Pine | 770 | 0.04178 | 0.82780 | 0.02886 | 0.82532 |
| Pine | 775 | 0.04251 | 0.83301 | 0.03002 | 0.82758 |
| Pine | 780 | 0.04318 | 0.83784 | 0.03006 | 0.82982 |
| Pine | 785 | 0.04374 | 0.84206 | 0.02973 | 0.83173 |
| Pine | 790 | 0.04435 | 0.84698 | 0.02975 | 0.83399 |
| Pine | 795 | 0.04455 | 0.84895 | 0.02994 | 0.83508 |
| Pine | 800 | 0.04468 | 0.85071 | 0.02906 | 0.83633 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample | Time | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|--------|------|--|---|---|------------------------------------|
| (-) | (s) | | | | |
| Pine | 805 | 0.04470 | 0.85213 | 0.02977 | 0.83787 |
| Pine | 810 | 0.04460 | 0.85278 | 0.03016 | 0.83924 |
| Pine | 815 | 0.04441 | 0.85300 | 0.03153 | 0.84058 |
| Pine | 820 | 0.04422 | 0.85294 | 0.03282 | 0.84155 |
| Pine | 825 | 0.04404 | 0.85277 | 0.03217 | 0.84228 |
| Pine | 830 | 0.04381 | 0.85250 | 0.03134 | 0.84329 |
| Pine | 835 | 0.04359 | 0.85219 | 0.03267 | 0.84403 |
| Pine | 840 | 0.04335 | 0.85181 | 0.03273 | 0.84481 |
| Pine | 845 | 0.04311 | 0.85141 | 0.03383 | 0.84561 |
| Pine | 850 | 0.04290 | 0.85103 | 0.03320 | 0.84628 |
| Pine | 855 | 0.04269 | 0.85066 | 0.03375 | 0.84686 |
| Pine | 860 | 0.04251 | 0.85033 | 0.03281 | 0.84729 |
| Pine | 865 | 0.04224 | 0.84984 | 0.03657 | 0.84819 |
| Pine | 870 | 0.04205 | 0.84948 | 0.03599 | 0.84874 |
| Pine | 875 | 0.04192 | 0.84924 | 0.03566 | 0.84891 |
| Pine | 880 | 0.04176 | 0.84894 | 0.03522 | 0.84931 |
| Pine | 885 | 0.04159 | 0.84864 | 0.03597 | 0.84986 |
| Pine | 890 | 0.04140 | 0.84835 | 0.03734 | 0.85049 |
| Pine | 895 | 0.04125 | 0.84812 | 0.03784 | 0.85099 |
| Pine | 900 | 0.04110 | 0.84794 | 0.03840 | 0.85147 |
| Pine | 905 | 0.04101 | 0.84777 | 0.03448 | 0.85165 |
| Pine | 910 | 0.04082 | 0.84778 | 0.03544 | 0.85258 |
| Pine | 915 | 0.04069 | 0.84784 | 0.03520 | 0.85312 |
| Pine | 920 | 0.04061 | 0.84781 | 0.03547 | 0.85334 |
| Pine | 925 | 0.04050 | 0.84805 | 0.03643 | 0.85388 |
| Pine | 930 | 0.04042 | 0.84819 | 0.03652 | 0.85418 |
| Pine | 935 | 0.04035 | 0.84838 | 0.03702 | 0.85447 |
| Pine | 940 | 0.04030 | 0.84838 | 0.03517 | 0.85459 |
| Pine | 945 | 0.04023 | 0.84867 | 0.03654 | 0.85489 |
| Pine | 950 | 0.04016 | 0.84951 | 0.03902 | 0.85546 |
| Pine | 955 | 0.04008 | 0.85061 | 0.04114 | 0.85598 |
| Pine | 960 | 0.03999 | 0.85290 | 0.04293 | 0.85679 |
| Pine | 965 | 0.03995 | 0.85381 | 0.04166 | 0.85705 |
| Pine | 970 | 0.03993 | 0.85390 | 0.04442 | 0.85710 |
| Pine | 975 | 0.03990 | 0.85419 | 0.04206 | 0.85716 |
| Pine | 980 | 0.03985 | 0.85632 | 0.04259 | 0.85763 |
| Pine | 985 | 0.03983 | 0.85664 | 0.04357 | 0.85774 |
| Pine | 990 | 0.03986 | 0.85430 | 0.04117 | 0.85729 |
| Pine | 995 | 0.03985 | 0.85430 | 0.04429 | 0.85732 |
| Pine | 1000 | 0.03982 | 0.85590 | 0.04481 | 0.85767 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Pine | 1005 | 0.03980 | 0.85696 | 0.04648 | 0.85790 |
| Pine | 1010 | 0.03975 | 0.86073 | 0.04558 | 0.85853 |
| Pine | 1015 | 0.03973 | 0.86200 | 0.04335 | 0.85872 |
| Pine | 1020 | 0.03973 | 0.86234 | 0.04474 | 0.85877 |
| Pine | 1025 | 0.03973 | 0.86291 | 0.04583 | 0.85886 |
| Pine | 1030 | 0.03973 | 0.86396 | 0.04634 | 0.85899 |
| Pine | 1035 | 0.03973 | 0.86468 | 0.04496 | 0.85910 |
| Pine | 1040 | 0.03972 | 0.86693 | 0.04522 | 0.85936 |
| Pine | 1045 | 0.03974 | 0.86674 | 0.04567 | 0.85936 |
| Pine | 1050 | 0.03975 | 0.86761 | 0.04537 | 0.85949 |
| Pine | 1055 | 0.03976 | 0.86795 | 0.04597 | 0.85956 |
| Pine | 1060 | 0.03976 | 0.86983 | 0.04477 | 0.85975 |
| Pine | 1065 | 0.03980 | 0.86833 | 0.04620 | 0.85962 |
| Pine | 1070 | 0.03981 | 0.87025 | 0.04824 | 0.85981 |
| Pine | 1075 | 0.03981 | 0.87330 | 0.04777 | 0.86011 |
| Pine | 1080 | 0.03982 | 0.87680 | 0.04951 | 0.86042 |
| Pine | 1085 | 0.03984 | 0.87896 | 0.04739 | 0.86059 |
| Pine | 1090 | 0.03986 | 0.88096 | 0.04959 | 0.86077 |
| Pine | 1095 | 0.03990 | 0.88143 | 0.05217 | 0.86082 |
| Pine | 1100 | 0.03992 | 0.88538 | 0.05138 | 0.86112 |
| Pine | 1105 | 0.03996 | 0.88572 | 0.05063 | 0.86116 |
| Pine | 1110 | 0.04001 | 0.88496 | 0.04801 | 0.86112 |
| Pine | 1115 | 0.04006 | 0.88681 | 0.04592 | 0.86126 |
| Pine | 1120 | 0.04010 | 0.89137 | 0.04755 | 0.86158 |
| Pine | 1125 | 0.04016 | 0.89004 | 0.04675 | 0.86152 |
| Pine | 1130 | 0.04022 | 0.88799 | 0.04908 | 0.86141 |
| Pine | 1135 | 0.04028 | 0.88520 | 0.04893 | 0.86125 |
| Pine | 1140 | 0.04034 | 0.88685 | 0.05011 | 0.86137 |
| Pine | 1145 | 0.04041 | 0.88922 | 0.04826 | 0.86155 |
| Pine | 1150 | 0.04048 | 0.89009 | 0.04911 | 0.86161 |
| Pine | 1155 | 0.04055 | 0.89131 | 0.05088 | 0.86173 |
| Pine | 1160 | 0.04063 | 0.89122 | 0.05088 | 0.86174 |
| Pine | 1165 | 0.04072 | 0.89314 | 0.05033 | 0.86190 |
| Pine | 1170 | 0.04081 | 0.89419 | 0.04817 | 0.86198 |
| Pine | 1175 | 0.04090 | 0.89429 | 0.04614 | 0.86202 |
| Pine | 1180 | 0.04101 | 0.89779 | 0.04782 | 0.86226 |
| Pine | 1185 | 0.04109 | 0.89494 | 0.04917 | 0.86210 |
| Pine | 1190 | 0.04116 | 0.89121 | 0.04443 | 0.86191 |
| Pine | 1195 | 0.04129 | 0.89506 | 0.05010 | 0.86218 |
| Pine | 1200 | 0.04141 | 0.89612 | 0.04757 | 0.86229 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Pine | 1205 | 0.04155 | 0.89764 | 0.05155 | 0.86244 |
| Pine | 1210 | 0.04168 | 0.89866 | 0.05059 | 0.86252 |
| Pine | 1215 | 0.04189 | 0.90374 | 0.05393 | 0.86289 |
| Pine | 1220 | 0.04206 | 0.90495 | 0.05570 | 0.86301 |
| Pine | 1225 | 0.04212 | 0.90121 | 0.05317 | 0.86279 |
| Pine | 1230 | 0.04228 | 0.90220 | 0.05148 | 0.86288 |
| Pine | 1235 | 0.04260 | 0.90838 | 0.05483 | 0.86338 |
| Pine | 1240 | 0.04273 | 0.90727 | 0.05338 | 0.86337 |
| Pine | 1245 | 0.04280 | 0.90401 | 0.05258 | 0.86315 |
| Pine | 1250 | 0.04291 | 0.90241 | 0.05387 | 0.86308 |
| Pine | 1255 | 0.04322 | 0.90618 | 0.05772 | 0.86342 |
| Pine | 1260 | 0.04330 | 0.90346 | 0.05292 | 0.86325 |
| Pine | 1265 | 0.04339 | 0.90123 | 0.05082 | 0.86314 |
| Pine | 1270 | 0.04355 | 0.90058 | 0.05144 | 0.86314 |
| Pine | 1275 | 0.04373 | 0.90050 | 0.05341 | 0.86318 |
| Pine | 1280 | 0.04417 | 0.90534 | 0.05293 | 0.86364 |
| Pine | 1285 | 0.04451 | 0.90726 | 0.05375 | 0.86391 |
| Pine | 1290 | 0.04478 | 0.90771 | 0.05452 | 0.86402 |
| Pine | 1295 | 0.04517 | 0.90910 | 0.05566 | 0.86429 |
| Pine | 1300 | 0.04542 | 0.90872 | 0.05772 | 0.86437 |
| Pine | 1305 | 0.04526 | 0.90449 | 0.05449 | 0.86396 |
| Pine | 1310 | 0.04558 | 0.90506 | 0.05442 | 0.86415 |
| Pine | 1315 | 0.04564 | 0.90306 | 0.05554 | 0.86401 |
| Pine | 1320 | 0.04580 | 0.90205 | 0.05461 | 0.86398 |
| Pine | 1325 | 0.04602 | 0.90153 | 0.05398 | 0.86403 |
| Pine | 1330 | 0.04599 | 0.89878 | 0.05308 | 0.86376 |
| Pine | 1335 | 0.04656 | 0.90134 | 0.05255 | 0.86422 |
| Pine | 1340 | 0.04694 | 0.90165 | 0.05425 | 0.86445 |
| Pine | 1345 | 0.04699 | 0.90002 | 0.05525 | 0.86431 |
| Pine | 1350 | 0.04702 | 0.89827 | 0.05508 | 0.86415 |
| Pine | 1355 | 0.04717 | 0.89724 | 0.05294 | 0.86413 |
| Pine | 1360 | 0.04743 | 0.89694 | 0.05338 | 0.86421 |
| Pine | 1365 | 0.04761 | 0.89612 | 0.05441 | 0.86423 |
| Pine | 1370 | 0.04764 | 0.89457 | 0.05145 | 0.86410 |
| Pine | 1375 | 0.04805 | 0.89492 | 0.05365 | 0.86434 |
| Pine | 1380 | 0.04784 | 0.89220 | 0.05249 | 0.86397 |
| Pine | 1385 | 0.04819 | 0.89244 | 0.05363 | 0.86418 |
| Pine | 1390 | 0.04859 | 0.89257 | 0.05411 | 0.86442 |
| Pine | 1395 | 0.04885 | 0.89203 | 0.05442 | 0.86452 |
| Pine | 1400 | 0.04887 | 0.89080 | 0.05686 | 0.86440 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Pine | 1405 | 0.04887 | 0.88945 | 0.05372 | 0.86427 |
| Pine | 1410 | 0.04878 | 0.88768 | 0.05470 | 0.86405 |
| Pine | 1415 | 0.04879 | 0.88632 | 0.05285 | 0.86395 |
| Pine | 1420 | 0.04905 | 0.88612 | 0.05317 | 0.86407 |
| Pine | 1425 | 0.04924 | 0.88560 | 0.05313 | 0.86414 |
| Pine | 1430 | 0.04939 | 0.88492 | 0.05373 | 0.86415 |
| Pine | 1435 | 0.04959 | 0.88445 | 0.05381 | 0.86421 |
| Pine | 1440 | 0.04928 | 0.88196 | 0.05396 | 0.86380 |
| Pine | 1445 | 0.04940 | 0.88131 | 0.05627 | 0.86383 |
| Pine | 1450 | 0.04983 | 0.88189 | 0.05451 | 0.86412 |
| Pine | 1455 | 0.05026 | 0.88211 | 0.05547 | 0.86440 |
| Pine | 1460 | 0.05076 | 0.88210 | 0.05375 | 0.86472 |
| Pine | 1465 | 0.05083 | 0.88136 | 0.05252 | 0.86469 |
| Pine | 1470 | 0.05093 | 0.88069 | 0.05412 | 0.86468 |
| Pine | 1475 | 0.05111 | 0.88014 | 0.05583 | 0.86475 |
| Pine | 1480 | 0.05110 | 0.87939 | 0.05415 | 0.86465 |
| Pine | 1485 | 0.05159 | 0.87913 | 0.05747 | 0.86498 |
| Pine | 1490 | 0.05200 | 0.87853 | 0.05698 | 0.86523 |
| Pine | 1495 | 0.05179 | 0.87801 | 0.05689 | 0.86499 |
| Pine | 1500 | 0.05182 | 0.87746 | 0.05317 | 0.86493 |
| Pine | 1505 | 0.05205 | 0.87702 | 0.05364 | 0.86505 |
| Pine | 1510 | 0.05207 | 0.87653 | 0.05471 | 0.86501 |
| Pine | 1515 | 0.05217 | 0.87609 | 0.05523 | 0.86504 |
| Pine | 1520 | 0.05241 | 0.87569 | 0.05456 | 0.86519 |
| Pine | 1525 | 0.05235 | 0.87527 | 0.05160 | 0.86508 |
| Pine | 1530 | 0.05241 | 0.87489 | 0.05155 | 0.86507 |
| Pine | 1535 | 0.05226 | 0.87437 | 0.05014 | 0.86489 |
| Pine | 1540 | 0.05210 | 0.87371 | 0.04845 | 0.86470 |
| Pine | 1545 | 0.05216 | 0.87336 | 0.05212 | 0.86470 |
| Pine | 1550 | 0.05204 | 0.87267 | 0.05308 | 0.86452 |
| Pine | 1555 | 0.05271 | 0.87332 | 0.05319 | 0.86506 |
| Pine | 1560 | 0.05300 | 0.87322 | 0.05186 | 0.86526 |
| Pine | 1565 | 0.05265 | 0.87264 | 0.04919 | 0.86489 |
| Pine | 1570 | 0.05279 | 0.87253 | 0.05278 | 0.86498 |
| Pine | 1575 | 0.05275 | 0.87219 | 0.05496 | 0.86488 |
| Pine | 1580 | 0.05295 | 0.87222 | 0.05590 | 0.86502 |
| Pine | 1585 | 0.05301 | 0.87207 | 0.05577 | 0.86503 |
| Pine | 1590 | 0.05273 | 0.87131 | 0.05261 | 0.86473 |
| Pine | 1595 | 0.05267 | 0.87089 | 0.05221 | 0.86462 |
| Pine | 1600 | 0.05302 | 0.87145 | 0.05348 | 0.86489 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Pine | 1605 | 0.05329 | 0.87174 | 0.05470 | 0.86511 |
| Pine | 1610 | 0.05325 | 0.87151 | 0.05427 | 0.86503 |
| Pine | 1615 | 0.05336 | 0.87156 | 0.05476 | 0.86509 |
| Pine | 1620 | 0.05358 | 0.87180 | 0.05346 | 0.86526 |
| Pine | 1625 | 0.05389 | 0.87209 | 0.05652 | 0.86552 |
| Pine | 1630 | 0.05389 | 0.87205 | 0.05513 | 0.86548 |
| Pine | 1635 | 0.05413 | 0.87224 | 0.05672 | 0.86568 |
| Pine | 1640 | 0.05409 | 0.87221 | 0.05617 | 0.86561 |
| Pine | 1645 | 0.05437 | 0.87242 | 0.05816 | 0.86586 |
| Pine | 1650 | 0.05437 | 0.87246 | 0.05811 | 0.86582 |
| Pine | 1655 | 0.05434 | 0.87248 | 0.05412 | 0.86576 |
| Pine | 1660 | 0.05443 | 0.87258 | 0.05637 | 0.86581 |
| Pine | 1665 | 0.05442 | 0.87260 | 0.05826 | 0.86577 |
| Pine | 1670 | 0.05437 | 0.87257 | 0.05711 | 0.86569 |
| Pine | 1675 | 0.05450 | 0.87276 | 0.05756 | 0.86581 |
| Pine | 1680 | 0.05444 | 0.87270 | 0.05987 | 0.86569 |
| Pine | 1685 | 0.05458 | 0.87292 | 0.05481 | 0.86583 |
| Pine | 1690 | 0.05458 | 0.87293 | 0.05494 | 0.86578 |
| Pine | 1695 | 0.05472 | 0.87315 | 0.05654 | 0.86591 |
| Pine | 1700 | 0.05493 | 0.87344 | 0.05695 | 0.86615 |
| Pine | 1705 | 0.05512 | 0.87364 | 0.06064 | 0.86634 |
| Pine | 1710 | 0.05546 | 0.87380 | 0.05724 | 0.86673 |
| Pine | 1715 | 0.05513 | 0.87378 | 0.05439 | 0.86629 |
| Pine | 1720 | 0.05503 | 0.87372 | 0.05644 | 0.86615 |
| Pine | 1725 | 0.05509 | 0.87382 | 0.05796 | 0.86618 |
| Pine | 1730 | 0.05512 | 0.87388 | 0.05473 | 0.86618 |
| Pine | 1735 | 0.05522 | 0.87403 | 0.05548 | 0.86627 |
| Pine | 1740 | 0.05526 | 0.87410 | 0.06038 | 0.86629 |
| Pine | 1745 | 0.05540 | 0.87428 | 0.05532 | 0.86646 |
| Pine | 1750 | 0.05543 | 0.87432 | 0.05619 | 0.86643 |
| Pine | 1755 | 0.05547 | 0.87438 | 0.05835 | 0.86646 |
| Pine | 1760 | 0.05560 | 0.87453 | 0.05969 | 0.86662 |
| Pine | 1765 | 0.05560 | 0.87453 | 0.05995 | 0.86660 |
| Pine | 1770 | 0.05560 | 0.87451 | 0.05945 | 0.86657 |
| Pine | 1775 | 0.05573 | 0.87466 | 0.05993 | 0.86675 |
| Pine | 1780 | 0.05557 | 0.87437 | 0.05636 | 0.86648 |
| Pine | 1785 | 0.05557 | 0.87430 | 0.05403 | 0.86644 |
| Pine | 1790 | 0.05553 | 0.87412 | 0.05558 | 0.86633 |
| Pine | 1795 | 0.05531 | 0.87334 | 0.05508 | 0.86598 |
| Pine | 1800 | 0.05531 | 0.87314 | 0.05490 | 0.86595 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Paulownia | 0 | 0.27204 | 0.87483 | 0.24096 | 0.87326 |
| Paulownia | 5 | 0.16612 | 0.85005 | 0.16008 | 0.86099 |
| Paulownia | 10 | 0.12369 | 0.84963 | 0.11630 | 0.85494 |
| Paulownia | 15 | 0.10351 | 0.84479 | 0.08956 | 0.85132 |
| Paulownia | 20 | 0.09317 | 0.84280 | 0.07472 | 0.84984 |
| Paulownia | 25 | 0.08632 | 0.84287 | 0.06589 | 0.84946 |
| Paulownia | 30 | 0.08127 | 0.84428 | 0.06209 | 0.84977 |
| Paulownia | 35 | 0.07701 | 0.84598 | 0.05676 | 0.85026 |
| Paulownia | 40 | 0.07373 | 0.84840 | 0.05442 | 0.85121 |
| Paulownia | 45 | 0.07116 | 0.85083 | 0.05289 | 0.85237 |
| Paulownia | 50 | 0.06889 | 0.85255 | 0.05310 | 0.85336 |
| Paulownia | 55 | 0.06689 | 0.85373 | 0.05051 | 0.85423 |
| Paulownia | 60 | 0.06517 | 0.85454 | 0.04859 | 0.85502 |
| Paulownia | 65 | 0.06433 | 0.85527 | 0.04892 | 0.85619 |
| Paulownia | 70 | 0.06350 | 0.85556 | 0.04990 | 0.85720 |
| Paulownia | 75 | 0.06236 | 0.85555 | 0.04933 | 0.85783 |
| Paulownia | 80 | 0.06124 | 0.85542 | 0.05016 | 0.85836 |
| Paulownia | 85 | 0.06014 | 0.85523 | 0.04879 | 0.85879 |
| Paulownia | 90 | 0.05959 | 0.85487 | 0.04893 | 0.85961 |
| Paulownia | 95 | 0.05885 | 0.85454 | 0.04987 | 0.86016 |
| Paulownia | 100 | 0.05828 | 0.85415 | 0.05021 | 0.86083 |
| Paulownia | 105 | 0.05760 | 0.85386 | 0.05136 | 0.86130 |
| Paulownia | 110 | 0.05690 | 0.85364 | 0.05331 | 0.86163 |
| Paulownia | 115 | 0.05616 | 0.85349 | 0.05299 | 0.86177 |
| Paulownia | 120 | 0.05567 | 0.85331 | 0.04928 | 0.86224 |
| Paulownia | 125 | 0.05523 | 0.85323 | 0.04921 | 0.86277 |
| Paulownia | 130 | 0.05476 | 0.85321 | 0.05103 | 0.86314 |
| Paulownia | 135 | 0.05430 | 0.85325 | 0.05010 | 0.86344 |
| Paulownia | 140 | 0.05388 | 0.85334 | 0.05010 | 0.86372 |
| Paulownia | 145 | 0.05351 | 0.85362 | 0.04666 | 0.86420 |
| Paulownia | 150 | 0.05313 | 0.85385 | 0.04672 | 0.86446 |
| Paulownia | 155 | 0.05278 | 0.85404 | 0.04713 | 0.86463 |
| Paulownia | 160 | 0.05245 | 0.85450 | 0.04588 | 0.86497 |
| Paulownia | 165 | 0.05212 | 0.85517 | 0.04683 | 0.86542 |
| Paulownia | 170 | 0.05182 | 0.85566 | 0.04556 | 0.86566 |
| Paulownia | 175 | 0.05147 | 0.85707 | 0.04179 | 0.86633 |
| Paulownia | 180 | 0.05108 | 0.85923 | 0.04111 | 0.86710 |
| Paulownia | 185 | 0.05077 | 0.86043 | 0.05007 | 0.86742 |
| Paulownia | 190 | 0.05046 | 0.86181 | 0.04986 | 0.86778 |
| Paulownia | 195 | 0.05008 | 0.86469 | 0.04966 | 0.86842 |
| Paulownia | 200 | 0.04983 | 0.86564 | 0.05261 | 0.86856 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Paulownia | 205 | 0.04948 | 0.86855 | 0.04648 | 0.86909 |
| Paulownia | 210 | 0.04916 | 0.87135 | 0.04562 | 0.86946 |
| Paulownia | 215 | 0.04877 | 0.87555 | 0.04590 | 0.87001 |
| Paulownia | 220 | 0.04851 | 0.87779 | 0.04272 | 0.87022 |
| Paulownia | 225 | 0.04822 | 0.88096 | 0.04299 | 0.87054 |
| Paulownia | 230 | 0.04788 | 0.88532 | 0.04375 | 0.87096 |
| Paulownia | 235 | 0.04768 | 0.88706 | 0.04527 | 0.87107 |
| Paulownia | 240 | 0.04761 | 0.88626 | 0.04338 | 0.87097 |
| Paulownia | 245 | 0.04705 | 0.89621 | 0.04225 | 0.87175 |
| Paulownia | 250 | 0.04672 | 0.90150 | 0.04332 | 0.87208 |
| Paulownia | 255 | 0.04636 | 0.90798 | 0.03937 | 0.87245 |
| Paulownia | 260 | 0.04596 | 0.91553 | 0.03984 | 0.87285 |
| Paulownia | 265 | 0.04576 | 0.91855 | 0.04075 | 0.87296 |
| Paulownia | 270 | 0.04519 | 0.93092 | 0.04042 | 0.87351 |
| Paulownia | 275 | 0.04440 | 0.94981 | 0.03842 | 0.87427 |
| Paulownia | 280 | 0.04386 | 0.96266 | 0.03698 | 0.87467 |
| Paulownia | 285 | 0.04325 | 0.97781 | 0.03968 | 0.87513 |
| Paulownia | 290 | 0.04256 | 0.99540 | 0.03953 | 0.87563 |
| Paulownia | 295 | 0.04219 | 1.00432 | 0.03808 | 0.87584 |
| Paulownia | 300 | 0.04208 | 1.00612 | 0.03891 | 0.87585 |
| Paulownia | 305 | 0.04157 | 1.01912 | 0.03719 | 0.87616 |
| Paulownia | 310 | 0.04122 | 1.02802 | 0.03826 | 0.87637 |
| Paulownia | 315 | 0.04099 | 1.03349 | 0.04088 | 0.87647 |
| Paulownia | 320 | 0.04090 | 1.03511 | 0.03863 | 0.87647 |
| Paulownia | 325 | 0.04083 | 1.03617 | 0.03776 | 0.87649 |
| Paulownia | 330 | 0.04063 | 1.04094 | 0.03584 | 0.87660 |
| Paulownia | 335 | 0.04034 | 1.04852 | 0.03722 | 0.87674 |
| Paulownia | 340 | 0.04026 | 1.04992 | 0.03952 | 0.87672 |
| Paulownia | 345 | 0.04021 | 1.05051 | 0.04018 | 0.87672 |
| Paulownia | 350 | 0.03992 | 1.05822 | 0.04063 | 0.87689 |
| Paulownia | 355 | 0.03991 | 1.05773 | 0.03973 | 0.87682 |
| Paulownia | 360 | 0.03983 | 1.05912 | 0.03919 | 0.87682 |
| Paulownia | 365 | 0.03986 | 1.05756 | 0.03953 | 0.87674 |
| Paulownia | 370 | 0.03956 | 1.06567 | 0.04083 | 0.87692 |
| Paulownia | 375 | 0.03902 | 1.08128 | 0.03975 | 0.87724 |
| Paulownia | 380 | 0.03895 | 1.08265 | 0.03944 | 0.87723 |
| Paulownia | 385 | 0.03883 | 1.08571 | 0.04095 | 0.87725 |
| Paulownia | 390 | 0.03890 | 1.08278 | 0.04339 | 0.87718 |
| Paulownia | 395 | 0.03857 | 1.09243 | 0.04044 | 0.87737 |
| Paulownia | 400 | 0.03812 | 1.10571 | 0.04193 | 0.87764 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Paulownia | 405 | 0.03800 | 1.10897 | 0.03948 | 0.87768 |
| Paulownia | 410 | 0.03749 | 1.12458 | 0.04003 | 0.87801 |
| Paulownia | 415 | 0.03817 | 1.10212 | 0.04364 | 0.87750 |
| Paulownia | 420 | 0.03884 | 1.08019 | 0.03994 | 0.87699 |
| Paulownia | 425 | 0.03871 | 1.08360 | 0.03829 | 0.87703 |
| Paulownia | 430 | 0.03879 | 1.08041 | 0.03623 | 0.87695 |
| Paulownia | 435 | 0.03841 | 1.09147 | 0.03715 | 0.87714 |
| Paulownia | 440 | 0.03833 | 1.09327 | 0.03949 | 0.87716 |
| Paulownia | 445 | 0.03860 | 1.08380 | 0.03687 | 0.87693 |
| Paulownia | 450 | 0.03847 | 1.08724 | 0.04324 | 0.87700 |
| Paulownia | 455 | 0.03846 | 1.08674 | 0.04066 | 0.87697 |
| Paulownia | 460 | 0.03826 | 1.09204 | 0.04066 | 0.87705 |
| Paulownia | 465 | 0.03819 | 1.09340 | 0.04282 | 0.87707 |
| Paulownia | 470 | 0.03831 | 1.08858 | 0.04045 | 0.87695 |
| Paulownia | 475 | 0.03808 | 1.09511 | 0.03862 | 0.87708 |
| Paulownia | 480 | 0.03808 | 1.09416 | 0.04025 | 0.87704 |
| Paulownia | 485 | 0.03765 | 1.10709 | 0.03808 | 0.87733 |
| Paulownia | 490 | 0.03802 | 1.09389 | 0.03790 | 0.87701 |
| Paulownia | 495 | 0.03822 | 1.08628 | 0.03662 | 0.87682 |
| Paulownia | 500 | 0.03818 | 1.08660 | 0.03806 | 0.87681 |
| Paulownia | 505 | 0.03839 | 1.07838 | 0.03735 | 0.87661 |
| Paulownia | 510 | 0.03835 | 1.07868 | 0.03705 | 0.87661 |
| Paulownia | 515 | 0.03808 | 1.08584 | 0.03680 | 0.87677 |
| Paulownia | 520 | 0.03797 | 1.08838 | 0.03981 | 0.87682 |
| Paulownia | 525 | 0.03793 | 1.08815 | 0.04261 | 0.87680 |
| Paulownia | 530 | 0.03741 | 1.10382 | 0.05112 | 0.87716 |
| Paulownia | 535 | 0.03806 | 1.08109 | 0.05673 | 0.87662 |
| Paulownia | 540 | 0.03874 | 1.05756 | 0.05194 | 0.87604 |
| Paulownia | 545 | 0.03883 | 1.05311 | 0.04504 | 0.87591 |
| Paulownia | 550 | 0.03873 | 1.05476 | 0.04009 | 0.87594 |
| Paulownia | 555 | 0.03841 | 1.06340 | 0.04140 | 0.87614 |
| Paulownia | 560 | 0.03839 | 1.06206 | 0.03698 | 0.87611 |
| Paulownia | 565 | 0.03839 | 1.06027 | 0.03884 | 0.87602 |
| Paulownia | 570 | 0.03860 | 1.05201 | 0.03900 | 0.87578 |
| Paulownia | 575 | 0.03860 | 1.05004 | 0.03465 | 0.87573 |
| Paulownia | 580 | 0.03872 | 1.04415 | 0.03840 | 0.87559 |
| Paulownia | 585 | 0.03872 | 1.04231 | 0.04033 | 0.87553 |
| Paulownia | 590 | 0.03854 | 1.04581 | 0.04401 | 0.87559 |
| Paulownia | 595 | 0.03841 | 1.04814 | 0.04363 | 0.87563 |
| Paulownia | 600 | 0.03825 | 1.05087 | 0.04338 | 0.87570 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Paulownia | 605 | 0.03847 | 1.04186 | 0.04514 | 0.87547 |
| Paulownia | 610 | 0.03853 | 1.03761 | 0.04059 | 0.87535 |
| Paulownia | 615 | 0.03864 | 1.03208 | 0.04502 | 0.87519 |
| Paulownia | 620 | 0.03859 | 1.03115 | 0.04818 | 0.87515 |
| Paulownia | 625 | 0.03865 | 1.02710 | 0.05186 | 0.87503 |
| Paulownia | 630 | 0.03859 | 1.02646 | 0.04807 | 0.87500 |
| Paulownia | 635 | 0.03834 | 1.03200 | 0.05193 | 0.87516 |
| Paulownia | 640 | 0.03850 | 1.02466 | 0.04753 | 0.87497 |
| Paulownia | 645 | 0.03831 | 1.02834 | 0.04912 | 0.87508 |
| Paulownia | 650 | 0.03868 | 1.01411 | 0.04978 | 0.87465 |
| Paulownia | 655 | 0.03843 | 1.01952 | 0.05271 | 0.87479 |
| Paulownia | 660 | 0.03841 | 1.01759 | 0.05244 | 0.87472 |
| Paulownia | 665 | 0.03840 | 1.01556 | 0.05141 | 0.87464 |
| Paulownia | 670 | 0.03864 | 1.00547 | 0.05177 | 0.87435 |
| Paulownia | 675 | 0.03869 | 1.00113 | 0.05201 | 0.87423 |
| Paulownia | 680 | 0.03876 | 0.99658 | 0.05177 | 0.87408 |
| Paulownia | 685 | 0.03865 | 0.99755 | 0.04993 | 0.87407 |
| Paulownia | 690 | 0.03856 | 0.99788 | 0.04984 | 0.87408 |
| Paulownia | 695 | 0.03856 | 0.99532 | 0.05040 | 0.87401 |
| Paulownia | 700 | 0.03837 | 0.99895 | 0.04710 | 0.87411 |
| Paulownia | 705 | 0.03843 | 0.99451 | 0.04449 | 0.87397 |
| Paulownia | 710 | 0.03839 | 0.99329 | 0.04374 | 0.87393 |
| Paulownia | 715 | 0.03793 | 1.00586 | 0.04428 | 0.87429 |
| Paulownia | 720 | 0.03759 | 1.01495 | 0.04553 | 0.87454 |
| Paulownia | 725 | 0.03731 | 1.02233 | 0.04509 | 0.87475 |
| Paulownia | 730 | 0.03718 | 1.02457 | 0.04499 | 0.87480 |
| Paulownia | 735 | 0.03724 | 1.02027 | 0.04464 | 0.87467 |
| Paulownia | 740 | 0.03740 | 1.01254 | 0.04635 | 0.87443 |
| Paulownia | 745 | 0.03765 | 1.00173 | 0.04361 | 0.87411 |
| Paulownia | 750 | 0.03790 | 0.99080 | 0.04231 | 0.87378 |
| Paulownia | 755 | 0.03792 | 0.98800 | 0.04191 | 0.87370 |
| Paulownia | 760 | 0.03776 | 0.99171 | 0.04304 | 0.87381 |
| Paulownia | 765 | 0.03758 | 0.99604 | 0.04554 | 0.87393 |
| Paulownia | 770 | 0.03750 | 0.99716 | 0.04859 | 0.87397 |
| Paulownia | 775 | 0.03742 | 0.99809 | 0.04653 | 0.87402 |
| Paulownia | 780 | 0.03750 | 0.99340 | 0.04428 | 0.87386 |
| Paulownia | 785 | 0.03760 | 0.98802 | 0.04421 | 0.87369 |
| Paulownia | 790 | 0.03761 | 0.98624 | 0.04565 | 0.87363 |
| Paulownia | 795 | 0.03757 | 0.98603 | 0.04424 | 0.87363 |
| Paulownia | 800 | 0.03762 | 0.98268 | 0.03961 | 0.87350 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Paulownia | 805 | 0.03760 | 0.98207 | 0.03900 | 0.87349 |
| Paulownia | 810 | 0.03745 | 0.98653 | 0.04044 | 0.87363 |
| Paulownia | 815 | 0.03735 | 0.98943 | 0.04296 | 0.87373 |
| Paulownia | 820 | 0.03720 | 0.99474 | 0.04383 | 0.87390 |
| Paulownia | 825 | 0.03718 | 0.99452 | 0.04280 | 0.87388 |
| Paulownia | 830 | 0.03715 | 0.99512 | 0.04146 | 0.87392 |
| Paulownia | 835 | 0.03710 | 0.99661 | 0.04111 | 0.87395 |
| Paulownia | 840 | 0.03721 | 0.99102 | 0.04132 | 0.87378 |
| Paulownia | 845 | 0.03728 | 0.98737 | 0.04063 | 0.87366 |
| Paulownia | 850 | 0.03744 | 0.98011 | 0.04180 | 0.87343 |
| Paulownia | 855 | 0.03746 | 0.97855 | 0.04230 | 0.87338 |
| Paulownia | 860 | 0.03756 | 0.97373 | 0.03964 | 0.87321 |
| Paulownia | 865 | 0.03758 | 0.97258 | 0.04079 | 0.87320 |
| Paulownia | 870 | 0.03756 | 0.97335 | 0.04240 | 0.87324 |
| Paulownia | 875 | 0.03756 | 0.97280 | 0.04270 | 0.87321 |
| Paulownia | 880 | 0.03749 | 0.97628 | 0.04341 | 0.87333 |
| Paulownia | 885 | 0.03754 | 0.97402 | 0.04410 | 0.87325 |
| Paulownia | 890 | 0.03740 | 0.98172 | 0.04268 | 0.87353 |
| Paulownia | 895 | 0.03739 | 0.98289 | 0.04097 | 0.87357 |
| Paulownia | 900 | 0.03745 | 0.98026 | 0.03821 | 0.87350 |
| Paulownia | 905 | 0.03757 | 0.97436 | 0.03752 | 0.87331 |
| Paulownia | 910 | 0.03765 | 0.97098 | 0.03968 | 0.87320 |
| Paulownia | 915 | 0.03762 | 0.97387 | 0.04001 | 0.87329 |
| Paulownia | 920 | 0.03763 | 0.97444 | 0.04231 | 0.87333 |
| Paulownia | 925 | 0.03767 | 0.97331 | 0.04029 | 0.87330 |
| Paulownia | 930 | 0.03760 | 0.97963 | 0.04174 | 0.87353 |
| Paulownia | 935 | 0.03758 | 0.98297 | 0.04132 | 0.87364 |
| Paulownia | 940 | 0.03766 | 0.97946 | 0.04251 | 0.87352 |
| Paulownia | 945 | 0.03769 | 0.98036 | 0.04305 | 0.87360 |
| Paulownia | 950 | 0.03778 | 0.97604 | 0.03999 | 0.87345 |
| Paulownia | 955 | 0.03786 | 0.97238 | 0.04124 | 0.87333 |
| Paulownia | 960 | 0.03790 | 0.97270 | 0.04296 | 0.87333 |
| Paulownia | 965 | 0.03794 | 0.97271 | 0.04341 | 0.87334 |
| Paulownia | 970 | 0.03795 | 0.97581 | 0.04094 | 0.87350 |
| Paulownia | 975 | 0.03808 | 0.96836 | 0.04204 | 0.87322 |
| Paulownia | 980 | 0.03811 | 0.96947 | 0.04222 | 0.87330 |
| Paulownia | 985 | 0.03816 | 0.96901 | 0.04232 | 0.87331 |
| Paulownia | 990 | 0.03820 | 0.97009 | 0.04230 | 0.87339 |
| Paulownia | 995 | 0.03827 | 0.96816 | 0.04127 | 0.87332 |
| Paulownia | 1000 | 0.03836 | 0.96457 | 0.03856 | 0.87319 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Paulownia | 1005 | 0.03841 | 0.96394 | 0.03691 | 0.87317 |
| Paulownia | 1010 | 0.03845 | 0.96724 | 0.03711 | 0.87333 |
| Paulownia | 1015 | 0.03852 | 0.96629 | 0.03884 | 0.87332 |
| Paulownia | 1020 | 0.03861 | 0.96103 | 0.03628 | 0.87311 |
| Paulownia | 1025 | 0.03871 | 0.95404 | 0.03729 | 0.87284 |
| Paulownia | 1030 | 0.03879 | 0.95007 | 0.03550 | 0.87267 |
| Paulownia | 1035 | 0.03884 | 0.95240 | 0.03789 | 0.87280 |
| Paulownia | 1040 | 0.03889 | 0.95393 | 0.03694 | 0.87289 |
| Paulownia | 1045 | 0.03896 | 0.95511 | 0.03607 | 0.87297 |
| Paulownia | 1050 | 0.03904 | 0.95159 | 0.03580 | 0.87283 |
| Paulownia | 1055 | 0.03911 | 0.95196 | 0.03549 | 0.87288 |
| Paulownia | 1060 | 0.03918 | 0.95331 | 0.03624 | 0.87295 |
| Paulownia | 1065 | 0.03926 | 0.95023 | 0.03429 | 0.87282 |
| Paulownia | 1070 | 0.03934 | 0.95232 | 0.03507 | 0.87296 |
| Paulownia | 1075 | 0.03942 | 0.95128 | 0.03291 | 0.87295 |
| Paulownia | 1080 | 0.03950 | 0.94900 | 0.03283 | 0.87289 |
| Paulownia | 1085 | 0.03957 | 0.94652 | 0.03543 | 0.87280 |
| Paulownia | 1090 | 0.03966 | 0.94717 | 0.03575 | 0.87286 |
| Paulownia | 1095 | 0.03974 | 0.94564 | 0.03421 | 0.87283 |
| Paulownia | 1100 | 0.03983 | 0.94432 | 0.03399 | 0.87281 |
| Paulownia | 1105 | 0.03993 | 0.94542 | 0.03467 | 0.87289 |
| Paulownia | 1110 | 0.04002 | 0.94387 | 0.03302 | 0.87285 |
| Paulownia | 1115 | 0.04017 | 0.94733 | 0.03387 | 0.87307 |
| Paulownia | 1120 | 0.04034 | 0.95065 | 0.03459 | 0.87332 |
| Paulownia | 1125 | 0.04040 | 0.94688 | 0.03871 | 0.87316 |
| Paulownia | 1130 | 0.04047 | 0.94420 | 0.03629 | 0.87305 |
| Paulownia | 1135 | 0.04051 | 0.93955 | 0.03639 | 0.87283 |
| Paulownia | 1140 | 0.04059 | 0.93710 | 0.03218 | 0.87273 |
| Paulownia | 1145 | 0.04072 | 0.93765 | 0.03546 | 0.87282 |
| Paulownia | 1150 | 0.04084 | 0.93710 | 0.03649 | 0.87285 |
| Paulownia | 1155 | 0.04094 | 0.93551 | 0.03663 | 0.87282 |
| Paulownia | 1160 | 0.04107 | 0.93543 | 0.03632 | 0.87286 |
| Paulownia | 1165 | 0.04119 | 0.93466 | 0.03529 | 0.87286 |
| Paulownia | 1170 | 0.04131 | 0.93359 | 0.03551 | 0.87285 |
| Paulownia | 1175 | 0.04140 | 0.93139 | 0.03627 | 0.87277 |
| Paulownia | 1180 | 0.04143 | 0.92701 | 0.03520 | 0.87255 |
| Paulownia | 1185 | 0.04150 | 0.92386 | 0.03497 | 0.87240 |
| Paulownia | 1190 | 0.04167 | 0.92483 | 0.03431 | 0.87253 |
| Paulownia | 1195 | 0.04174 | 0.92211 | 0.03140 | 0.87240 |
| Paulownia | 1200 | 0.04187 | 0.92126 | 0.02952 | 0.87239 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Paulownia | 1205 | 0.04203 | 0.92124 | 0.02926 | 0.87246 |
| Paulownia | 1210 | 0.04214 | 0.91960 | 0.02982 | 0.87240 |
| Paulownia | 1215 | 0.04229 | 0.91926 | 0.03231 | 0.87245 |
| Paulownia | 1220 | 0.04242 | 0.91801 | 0.03483 | 0.87242 |
| Paulownia | 1225 | 0.04263 | 0.91892 | 0.03587 | 0.87254 |
| Paulownia | 1230 | 0.04275 | 0.91727 | 0.03617 | 0.87243 |
| Paulownia | 1235 | 0.04280 | 0.91420 | 0.03709 | 0.87227 |
| Paulownia | 1240 | 0.04291 | 0.91228 | 0.03351 | 0.87220 |
| Paulownia | 1245 | 0.04309 | 0.91210 | 0.03152 | 0.87226 |
| Paulownia | 1250 | 0.04326 | 0.91169 | 0.03352 | 0.87229 |
| Paulownia | 1255 | 0.04339 | 0.91019 | 0.03219 | 0.87223 |
| Paulownia | 1260 | 0.04359 | 0.91023 | 0.03168 | 0.87232 |
| Paulownia | 1265 | 0.04383 | 0.91066 | 0.03197 | 0.87244 |
| Paulownia | 1270 | 0.04419 | 0.91270 | 0.03238 | 0.87273 |
| Paulownia | 1275 | 0.04431 | 0.91108 | 0.03352 | 0.87267 |
| Paulownia | 1280 | 0.04450 | 0.91043 | 0.03109 | 0.87264 |
| Paulownia | 1285 | 0.04468 | 0.90953 | 0.03296 | 0.87263 |
| Paulownia | 1290 | 0.04484 | 0.90840 | 0.03485 | 0.87260 |
| Paulownia | 1295 | 0.04499 | 0.90724 | 0.03335 | 0.87255 |
| Paulownia | 1300 | 0.04517 | 0.90627 | 0.03163 | 0.87255 |
| Paulownia | 1305 | 0.04530 | 0.90496 | 0.03208 | 0.87251 |
| Paulownia | 1310 | 0.04558 | 0.90506 | 0.03275 | 0.87266 |
| Paulownia | 1315 | 0.04562 | 0.90278 | 0.03418 | 0.87249 |
| Paulownia | 1320 | 0.04587 | 0.90273 | 0.03468 | 0.87260 |
| Paulownia | 1325 | 0.04592 | 0.90062 | 0.03239 | 0.87245 |
| Paulownia | 1330 | 0.04602 | 0.89911 | 0.03315 | 0.87234 |
| Paulownia | 1335 | 0.04630 | 0.89927 | 0.03278 | 0.87244 |
| Paulownia | 1340 | 0.04631 | 0.89694 | 0.03397 | 0.87225 |
| Paulownia | 1345 | 0.04640 | 0.89535 | 0.03369 | 0.87214 |
| Paulownia | 1350 | 0.04643 | 0.89321 | 0.02954 | 0.87198 |
| Paulownia | 1355 | 0.04662 | 0.89280 | 0.02788 | 0.87201 |
| Paulownia | 1360 | 0.04685 | 0.89268 | 0.03048 | 0.87212 |
| Paulownia | 1365 | 0.04722 | 0.89367 | 0.02911 | 0.87235 |
| Paulownia | 1370 | 0.04759 | 0.89426 | 0.03101 | 0.87258 |
| Paulownia | 1375 | 0.04774 | 0.89340 | 0.03124 | 0.87256 |
| Paulownia | 1380 | 0.04779 | 0.89191 | 0.03062 | 0.87246 |
| Paulownia | 1385 | 0.04780 | 0.89020 | 0.03023 | 0.87232 |
| Paulownia | 1390 | 0.04798 | 0.88963 | 0.02865 | 0.87236 |
| Paulownia | 1395 | 0.04800 | 0.88806 | 0.03107 | 0.87223 |
| Paulownia | 1400 | 0.04823 | 0.88782 | 0.03106 | 0.87231 |

Table S3. Predicted and true values of c and n for Iroko, Pine and Paulownia wood (continuation).

| Sample (-) | Time (s) | c Predicted (kJ mol ⁻¹ K ⁻¹) | n Predicted (mol s ⁻¹) | c True (kJ mol ⁻¹ K ⁻¹) | n True (mol s ⁻¹) |
|---------------|-------------|--|---|---|------------------------------------|
| Paulownia | 1405 | 0.04840 | 0.88728 | 0.03099 | 0.87235 |
| Paulownia | 1410 | 0.04859 | 0.88677 | 0.03281 | 0.87240 |
| Paulownia | 1415 | 0.04861 | 0.88539 | 0.03409 | 0.87226 |
| Paulownia | 1420 | 0.04885 | 0.88523 | 0.03188 | 0.87237 |
| Paulownia | 1425 | 0.04882 | 0.88364 | 0.03231 | 0.87223 |
| Paulownia | 1430 | 0.04898 | 0.88313 | 0.02934 | 0.87229 |
| Paulownia | 1435 | 0.04916 | 0.88268 | 0.03077 | 0.87234 |
| Paulownia | 1440 | 0.04914 | 0.88126 | 0.03278 | 0.87219 |
| Paulownia | 1445 | 0.04907 | 0.87960 | 0.03084 | 0.87201 |
| Paulownia | 1450 | 0.04897 | 0.87762 | 0.02960 | 0.87179 |
| Paulownia | 1455 | 0.04908 | 0.87703 | 0.02922 | 0.87180 |
| Paulownia | 1460 | 0.04925 | 0.87675 | 0.02837 | 0.87188 |
| Paulownia | 1465 | 0.04927 | 0.87567 | 0.02972 | 0.87181 |
| Paulownia | 1470 | 0.04932 | 0.87475 | 0.02962 | 0.87178 |
| Paulownia | 1475 | 0.04940 | 0.87406 | 0.03033 | 0.87177 |
| Paulownia | 1480 | 0.04946 | 0.87327 | 0.03174 | 0.87172 |
| Paulownia | 1485 | 0.04959 | 0.87290 | 0.02933 | 0.87173 |
| Paulownia | 1490 | 0.04936 | 0.87034 | 0.02838 | 0.87137 |
| Paulownia | 1495 | 0.04956 | 0.87057 | 0.02891 | 0.87151 |
| Paulownia | 1500 | 0.04970 | 0.87039 | 0.02744 | 0.87158 |
| Paulownia | 1505 | 0.04975 | 0.86970 | 0.02765 | 0.87154 |
| Paulownia | 1510 | 0.04982 | 0.86912 | 0.02751 | 0.87154 |
| Paulownia | 1515 | 0.04992 | 0.86878 | 0.02781 | 0.87155 |
| Paulownia | 1520 | 0.05001 | 0.86836 | 0.02683 | 0.87157 |
| Paulownia | 1525 | 0.05000 | 0.86742 | 0.02714 | 0.87148 |
| Paulownia | 1530 | 0.05013 | 0.86732 | 0.02740 | 0.87154 |
| Paulownia | 1535 | 0.05028 | 0.86736 | 0.02731 | 0.87160 |
| Paulownia | 1540 | 0.05034 | 0.86691 | 0.02655 | 0.87158 |
| Paulownia | 1545 | 0.05041 | 0.86653 | 0.02813 | 0.87157 |
| Paulownia | 1550 | 0.05052 | 0.86644 | 0.03012 | 0.87162 |
| Paulownia | 1555 | 0.05048 | 0.86548 | 0.02922 | 0.87151 |
| Paulownia | 1560 | 0.05064 | 0.86566 | 0.03104 | 0.87159 |
| Paulownia | 1565 | 0.05067 | 0.86520 | 0.02903 | 0.87158 |
| Paulownia | 1570 | 0.05078 | 0.86513 | 0.02912 | 0.87162 |
| Paulownia | 1575 | 0.05073 | 0.86422 | 0.02846 | 0.87152 |
| Paulownia | 1580 | 0.05064 | 0.86299 | 0.02910 | 0.87138 |
| Paulownia | 1585 | 0.05086 | 0.86375 | 0.03141 | 0.87154 |
| Paulownia | 1590 | 0.05103 | 0.86415 | 0.02946 | 0.87162 |
| Paulownia | 1595 | 0.05105 | 0.86370 | 0.02786 | 0.87157 |
| Paulownia | 1600 | 0.05090 | 0.86219 | 0.02688 | 0.87132 |

Notice: c Predicted: molar heat capacity of combustion products at constant pressure predicted by trained neural network; n Predicted: chemical amount flow rate of combustion products predicted by trained neural network; c True: molar heat capacity of combustion products at constant pressure; n True: chemical amount flow rate of combustion products.