Table S1. Reaction model types and corresponding reaction equations de/dt = -A exp(E/RT)$f(e, p)$ of Netzsch Thermokinetics software [1]

Code	$f(e, p)$	Reaction type
F_1	e	First-order reaction
F_2	e^2	Second-order reaction
F_n	e^n	nth-order reaction
R_2	$2e^{1/2}$	Two-dimensional phase boundary reaction
R_3	$3e^{2/3}$	Three-dimensional phase boundary reaction
D_1	$0.5/(1 - e)$	One-dimensional diffusion
D_2	$-1/\ln(e)$	Two-dimensional diffusion
D_3	$1.5e^{1/3}/(e^{-1/3} - 1)$	Three-dimensional diffusion (Jander's type)
D_4	$1.5/(e^{-1/3} - 1)$	Three-dimensional diffusion (Ginstling–Brounstein type)
B_1	ep	Simple Prout–Tompkins equation
B_{na}	$e^n p^a$	Expanded Prout–Tompkins equation (na)
C_{1-X}	$e(1 + K_{cat}X)$	First-order reaction with autocatalysis through the reactants, X $X = a$ product in the complex model, frequently $X = p$
C_{1-X}	$e^n(1 + K_{cat}X)$	nth-order reaction with autocatalysis through the reactants, X
A_2	$2e(-\ln(e))^{1/2}$	Two-dimensional nucleation
A_3	$3e(-\ln(e))^{2/3}$	Three-dimensional nucleation
A_n	$ne(-\ln(e))^{(n-1)/n}$	n-dimensional nucleation/nucleus growth according to Avrami–Erofeev

Where A is the pre-exponential factor; E is the activation energy; R is the gas constant; T is the temperature; α is the conversion degree; e is the starting concentration of the reactant ($e = 1 - \alpha$), and p is the concentration of the final product ($p = \alpha$).

[1] Netzsch Thermokinetics Software Manual, Selb: Netzsch-Gerätebau GmbH; 2014.