Supporting Information for:

Nucleation Control in the Aggregative Growth of Bismuth Nanocrystals

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Table S1. List of abbreviations and their definitions.

CSD	Nanocrystal size distribution
Γ	Nucleation rate (in s^{-1})
Γ_{max}	Maximum nucleation rate (in s^{-1})
Δt_n	Time window for nucleation (in min)
τ_n	Time at which Γ_{max} is achieved (in min)
τ_{OR}	Onset time for Ostwald Ripening (in min)
V_{crit}	Volume of the critical aggregate (in nm^3)
F_{crit}	Fraction of the aggregates in the CSD having the critical volume
$\bar{V}(t)$	Nanocrystal mean volume at time t (in nm^3)
$\bar{V}_{lim}$	Final mean nanocrystal volume (in nm^3), at the end of the active-growth regime
k_g	Growth rate (in s^{-1})
k_{OR}	Ostwald Ripening rate (in s^{-1})
n	Avrami exponent (unitless)

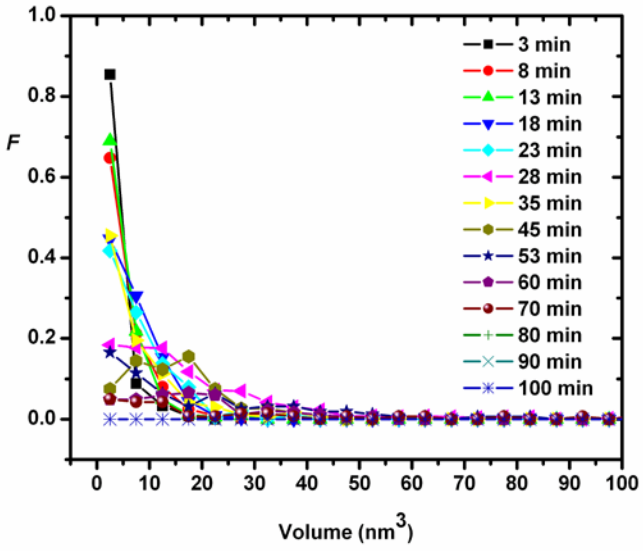

Figure S1. CSDs for the Bi nanocrystal growth conducted at $Na[N(SiMe_3)_2]$ concentration of 0.049 M, at the times indicated in the inset legend. The data were binned using a bin size of 5 nm^3. Peaks at the critical-aggregate size are not readily evident.

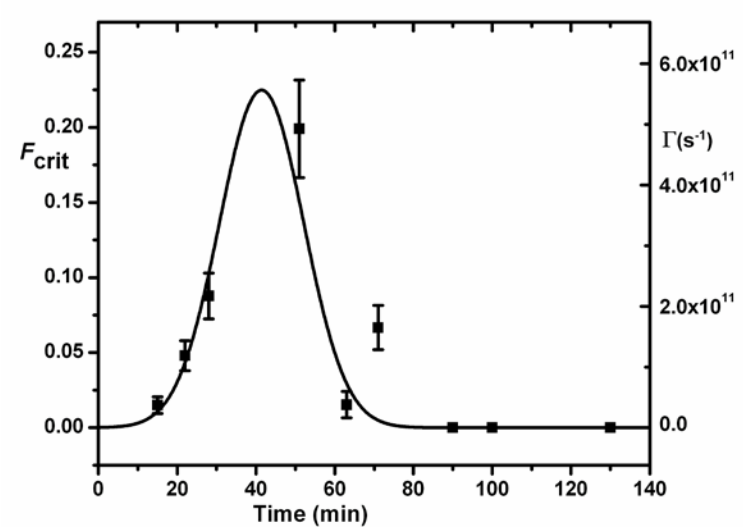

Figure S2. Nucleation function and Gaussian fit for the synthesis conducted at a $Na[N(SiMe_3)_2]$ concentration of 0.063 M. The left and right axes correspond to the critical-aggregate fraction F_{crit} and the scaled nucleation rate Γ, respectively.

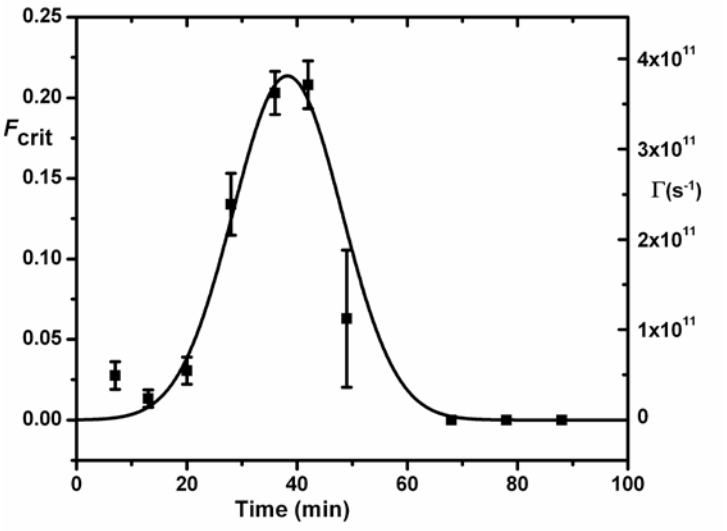

Figure S3. Nucleation function and Gaussian fit for the synthesis conducted at a $Na[N(SiMe_3)_2]$ concentration of 0.076 M. The left and right axes correspond to the critical-aggregate fraction F_{crit} and the scaled nucleation rate Γ, respectively.

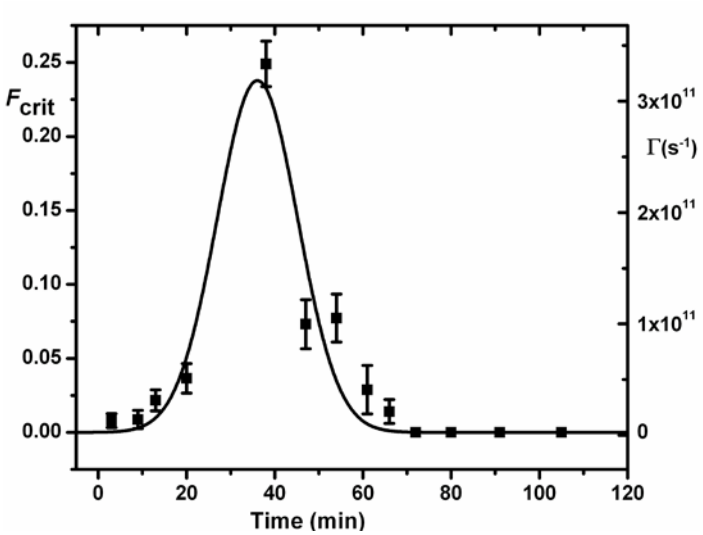

Figure S4. Nucleation function and Gaussian fit for the synthesis conducted at a $Na[N(SiMe_3)_2]$ concentration of 0.087 M. The left and right axes correspond to the critical-aggregate fraction F_{crit} and the scaled nucleation rate Γ, respectively.

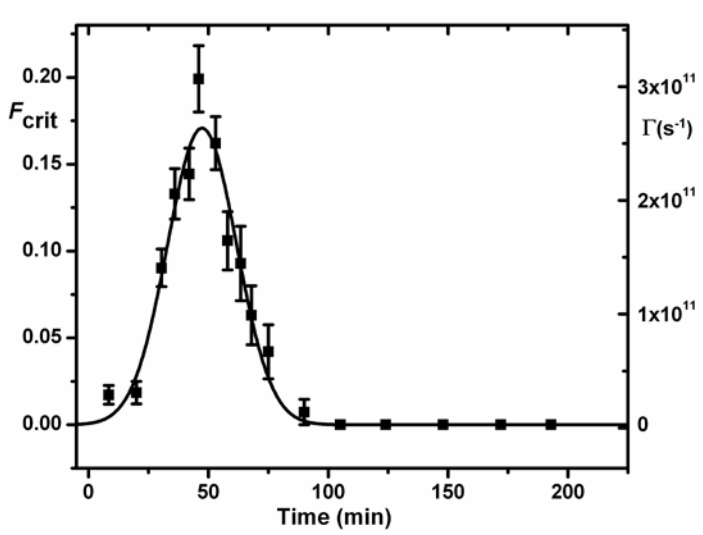

Figure S5. Nucleation function and Gaussian fit for the synthesis conducted at a $Na[N(SiMe_3)_2]$ concentration of 0.099 M. The left and right axes correspond to the critical-aggregate fraction F_{crit} and the scaled nucleation rate Γ, respectively.

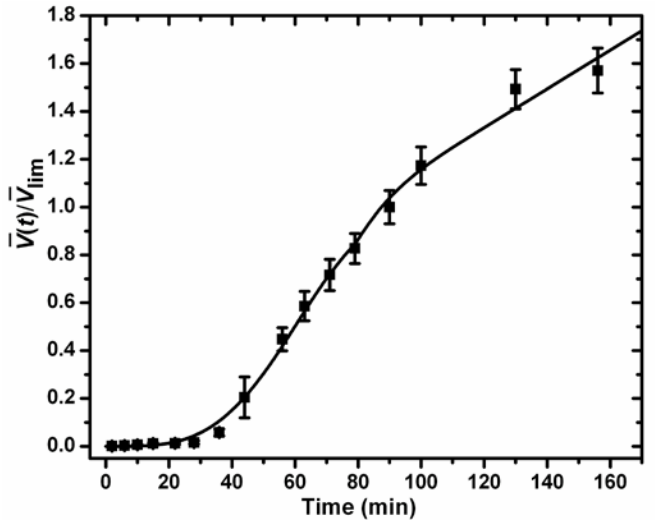

Figure S6. Kinetic data and the eq-1 fit for nanocrystal growth conducted at a $Na[N(SiMe_3)_2]$ concentration of 0.063 M.

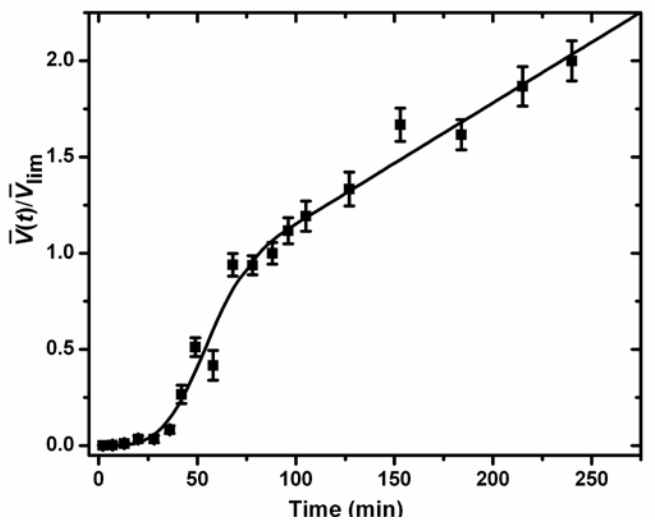

Figure S7. Kinetic data and the eq-1 fit for nanocrystal growth conducted at a $Na[N(SiMe_3)_2]$ concentration of 0.076 M.

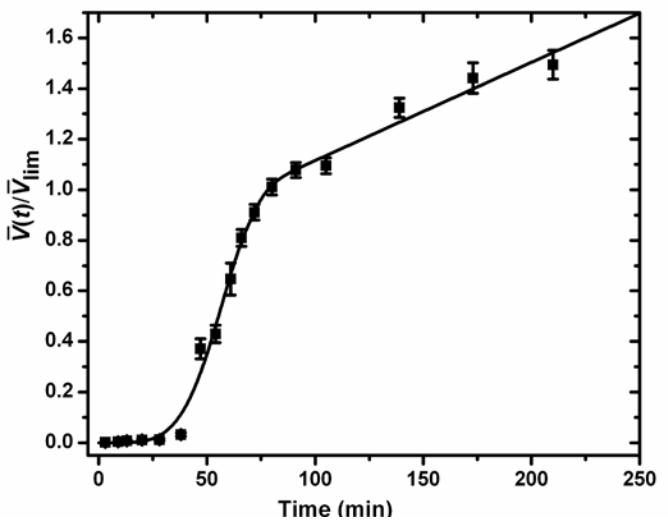

Figure S8. Kinetic data and the eq-1 fit for nanocrystal growth conducted at a $Na[N(SiMe_3)_2]$ concentration of 0.087 M.

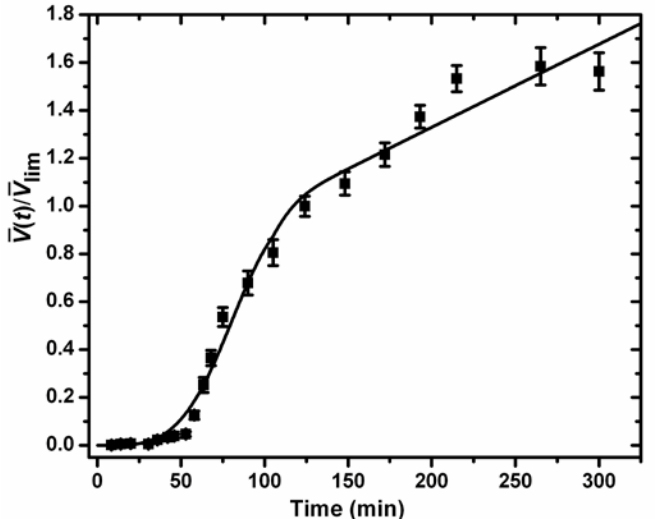

Figure S9. Kinetic data and the eq-1 fit for nanocrystal growth conducted at a $Na[N(SiMe_3)_2]$ concentration of 0.099 M.