Table S4. Results from the regression analyses for the predictive equation of Van der Burgh's coefficient K.

Van der Burg's Coefficient K Regression		
K	**R²**	**SE**
	0.72	0.11
Dimensionless ratio	*Exponent*	*SE*
Intercept	-5.10	1.97
B_f/B_1	0.30	0.12
g/C^2	0.09	0.10
E_1/H_1	0.97	0.31
h_1/b_2	0.11	0.12
H_1/h_1	1.10	0.36
λ_1/E_1	1.68	0.79

Table S5. Results from the regression analysis for the predictive equation of dispersion coefficient *D*.

Dispersion Coefficient D_1^{TA} Regression (1/2)					
Eqn. R1	**R^2**	**SE**	**Eqn. R2**	**R^2**	**SE**
	0.67	0.33		0.84	0.14
Dimensionless ratio	*Exponent*	*SE*	*Dimensionless ratio*	*Exponent*	*SE*
Coefficient	3.33	0.11	Coefficient	-0.93	0.05
Nr_1	0.84	0.09	Nr_1	0.57	0.04
Eqn. R3	**R^2**	**SE**	**Eqn. R4**	**R^2**	**SE**
	0.84	0.14		0.86	0.13
Dimensionless ratio	*Exponent*	*SE*	*Dimensionless ratio*	*Exponent*	*SE*
Coefficient	-0.82	0.30	Coefficient	-0.40	0.21
Nr_1	0.58	0.04	Nr_1	0.57	0.04
h_1/a_2	0.03	0.07	g/C^2	0.21	0.08
Eqn. R5	**R^2**	**SE**	**Eqn. R6**	**R^2**	**SE**
	0.84	0.14		0.84	0.14
Dimensionless ratio	*Exponent*	*SE*	*Dimensionless ratio*	*Exponent*	*SE*
Coefficient	-0.55	0.51	Coefficient	-0.87	0.40
Nr_1	0.57	0.04	Nr_1	0.57	0.04
H_1/E_1	0.10	0.14	h_1/E_1	0.02	0.12
Eqn. R7	**R^2**	**SE**	**Eqn. R8**	**R^2**	**SE**
	0.84	0.14		0.84	0.14
Dimensionless ratio	*Exponent*	*SE*	*Dimensionless ratio*	*Exponent*	*SE*
Coefficient	-0.91	0.26	Coefficient	-0.94	0.07
Nr_1	0.58	0.04	Nr_1	0.58	0.04
λ_1/E_1	-0.02	0.16	λ_1/a_2	0.02	0.07
Eqn. R9	**R^2**	**SE**	**Eqn. R10**	**R^2**	**SE**
	0.80	0.15		0.86	0.13
Dimensionless ratio	*Exponent*	*SE*	*Dimensionless ratio*	*Exponent*	*SE*
Coefficient	0.29	0.14	Coefficient	-0.53	0.31
$Nr_1 \cdot g/C^2$	0.51	0.04	Nr_1	0.56	0.04
			h_1/a_2	-0.04	0.07
			g/C^2	0.23	0.09

Dispersion Coefficient D_1^{TA} Regression (2/2)

Eqn. R11	R^2	SE	Eqn. R12	R^2	SE
	0.86	0.13		0.86	0.13
Dimensionless ratio	*Exponent*	*SE*	*Dimensionless ratio*	*Exponent*	*SE*
Coefficient	-0.63	0.48	Coefficient	-0.37	0.23
Nr_1	0.57	0.04	Nr_1	0.57	0.04
g/C^2	0.23	0.09	g/C^2	0.22	0.08
H_1/E_1	-0.08	0.15	λ_1/a_2	-0.02	0.07

Eqn. R13	R^2	SE	Eqn. R14	R^2	SE
	0.86	0.13		0.71	0.19
Dimensionless ratio	*Exponent*	*SE*	*Dimensionless ratio*	*Exponent*	*SE*
Coefficient	-0.41	0.31	Coefficient	1.70	0.31
Nr_1	0.57	0.04	$Nr_1.g/C^2.H_1/E_1$	0.44	0.04
g/C^2	0.21	0.08			
λ_1/E_1	0.01	0.15			

Eqn. R15	R^2	SE	Eqn. R16	R^2	SE
	0.80	0.16		0.86	0.14
Dimensionless ratio	*Exponent*	*SE*	*Dimensionless ratio*	*Exponent*	*SE*
Coefficient	-0.57	0.08	Coefficient	-0.63	0.48
$Nr_1.g/C^2.\lambda_1/E_1$	0.45	0.03	Nr_1	0.56	0.04
			h_1/a_2	-0.03	0.08
			g/C^2	0.24	0.10
			H_1/E_1	-0.05	0.17

Eqn. R17	R^2	SE	Eqn. R18	R^2	SE
	0.03	0.35		0.17	0.32
Dimensionless ratio	*Exponent*	*SE*	*Dimensionless ratio*	*Exponent*	*SE*
Coefficient	-1.29	1.23	Coefficient	-0.24	0.57
g/C^2	0.29	0.24	g/C^2	0.31	0.20
H_1/E_1	-0.12	0.38	B_1/h_1	-0.27	0.10