

Peter G. Vekilov

Publications

Book Chapters

1. P.G. Vekilov, *Elementary processes of protein crystal growth*, in **Studies and Concepts in Crystal Growth**, edited by H. Komatsu (Pergamon Press, Oxford, 1993) pp. 25-49.
2. P.G. Vekilov, *Cover Picture and Story*, in **Advances in Crystal Growth Research**, edited by K. Sato, Y. Furukawa, and K. Nakajima. (Elsevier, Amsterdam, 2001).
3. P.G. Vekilov and A.A. Chernov, *The Physics of Protein Crystallization*, in **Solid State Physics**, vol. 57, edited by H. Ehrenreich and F. Spaepen (Academic Press, New York, 2002) pp. 1-147.
4. O. Gliko and P. G. Vekilov, *Spatio-Temporal Patterns in Ferritin Crystal Growth*, in **Biological and Biomimetic Materials – Properties to Function**, edited by J. Aizenberg, J.M. McKittrick and C.A. Orme, (MRS, Warrendale, PA., 2002) pp. 141-146
5. P.G. Vekilov, A. Feeling-Taylor and R. Elison Hirsch, *Nucleation and growth of crystals of hemoglobins: case of HbC*, in **Methods in Hemoglobin Disorders, Series in Molecular Medicine**, edited by R.L. Nagel (Humana Press, Totowa, NJ, 2003).
6. P.G. Vekilov, *Solvent entropy effects in the formation of protein solid phases*, in **Methods in Enzymology volume 368: Macromolecular Crystallography, Part C** edited by C.W. Carter, Jr., and R.M. Sweet, (Academic Press, San Diego, 2003) pp. 84-105.
7. P.G. Vekilov, *Molecular mechanisms of defect formation*, in **Methods in Enzymology volume 368: Macromolecular Crystallography, Part C** edited by C.W. Carter, Jr., and R.M. Sweet (Academic Press, San Diego, 2003) pp. 170-188.
8. J.J. De Yoreo, P.G. Vekilov, *Principles of crystal nucleation and growth*, in **Biomineratization** edited by P.M. Dove, J.J. De Yoreo, S. Weiner (Mineral Soc. Am., Washington, DC, 2003) pp. 57-93
9. P.G. Vekilov, *Microscopic, mesoscopic, and macroscopic lengthscales in the kinetics of phase transformations with proteins*, in **Nanoscale Structure and Assembly at Solid-fluid Interfaces**, edited by J.J. De Yoreo and X.Y. Lui (Kluwer Press, New York, 2004) pp. 145-200.
10. P.G. Vekilov and O. Galkin, *Fundamental aspects of nucleation theory revealed in experiments with protein solid phases*, in **Nanoscale Structure and Assembly at Solid-fluid Interfaces**, edited by X.Y. Lui and J.J. De Yoreo (Kluwer Press, New York, 2004) pp. 105-144.
11. P.G. Vekilov, *Kinetics and mechanisms of protein crystallization at the molecular level*, in **Methods in Molecular Biology, vol. 300: Protein Nanotechnology, Protocols, Instrumentation, and Applications**, edited by T. Vo-Dinh (Humana Press, Totowa, NJ, 2005) pp. 15-52.

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12. P.G. Vekilov and J.I.D. Alexander, *Dynamics of layer growth in protein crystallization*, Chem. Rev. **100** (2000) 2061-2089.
13. P.G. Vekilov, *Self-Assembly of Apoferritin Molecules into Crystals: Thermodynamics of Molecular Level Processes*, Progress in Crystal Growth and Characterization of Materials **45** (2002) 175-199.
14. P.G. Vekilov, *Dense liquid precursor for the nucleation of ordered solid phases from solution*, Crystal Growth and Design, **4** (2004) 671-685.

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15. Yu.G. Kuznetsov, A.A. Chernov, P.G. Vekilov and I.L. Smol'skii, *Kinetics of growth of (101) faces of $\text{NH}_4\text{H}_2\text{PO}_4$ crystals from aqueous solutions*. Sov. Phys.-Crystallogr. **32** (1987) 584-587.
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