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Solubility, Thermal Analysis, and Association of the bis-Adducts of Light C60 Fullerene and Amino Acids Lysine, Threonine, and Hydroxyproline in Aqueous Solutions(Article)

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Abstract: The solubility of light fullerene C60 bis-adducts and essential amino acids lysine, threonine, and hydroxyproline in water in the temperature range of 20–80°C is studied via isothermal saturation inside ampoules. Complex thermal analysis is used to study crystalline hydrates  $C_{60}(C_6H_{13}N_2O_2)_2 \cdot 5H_2O$ ,  $C_{60}(C_4H_8NO_3)_2 \cdot 6H_2O$ ,  $C_{60}(C_5H_9NO_3)_2 \cdot 2H_2O$  in the temperature range of 40–1100°C. The concentration dependences of the sizes of associates in binary aqueous solutions of the indicated bis-adducts are studied via dynamic light scattering. © 2019, Pleiades Publishing, Ltd.