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Spectroscopic study of aqueous solutions of fullerene C_{60} mono-derivatives

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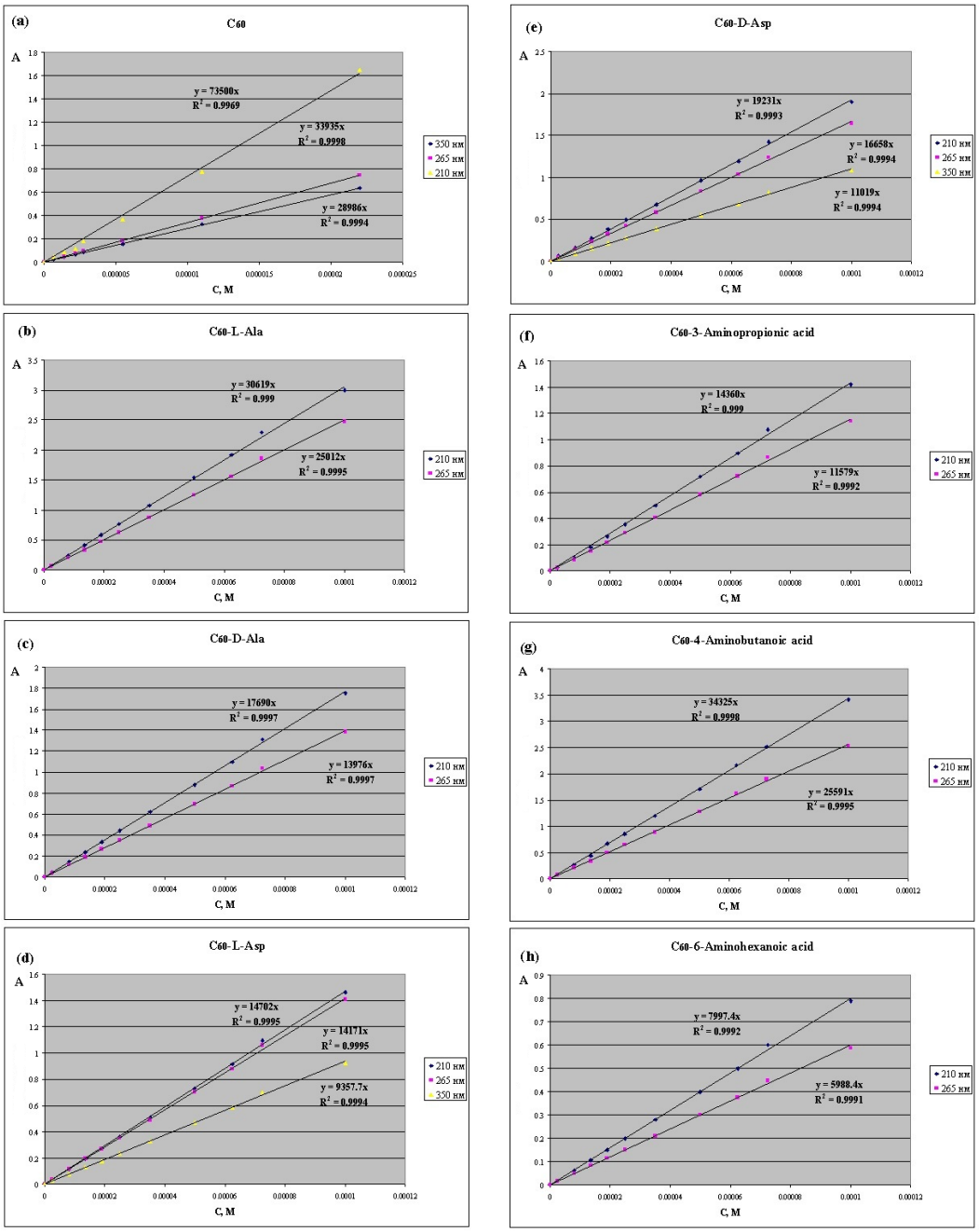

Figure S1. Dependence of the optical density (A) on the concentration (M) of an aqueous dispersion of C_{60} fullerene (a) C_{60}) and solutions of its *N*-substituted amino acid monoderivatives in the form of potassium salts: b) H-C_{60}-L-Ala, c) H-C_{60}-D-Ala, d) H-C_{60}-L-Asp, e) H-C_{60}-D-Asp, f) H-C_{60}-3-Aminopropionic acid, g) H-C_{60}-4-Aminobutanoic acid, h) H-C_{60}-6-Aminohexanoic acid. Fullerene C_{60} *N*-substituted amino acid monoderivatives for *D*-Asp and L-Asp the form of dipotassium salt.
Approximation of a linear dependence with the determination of its parameters.

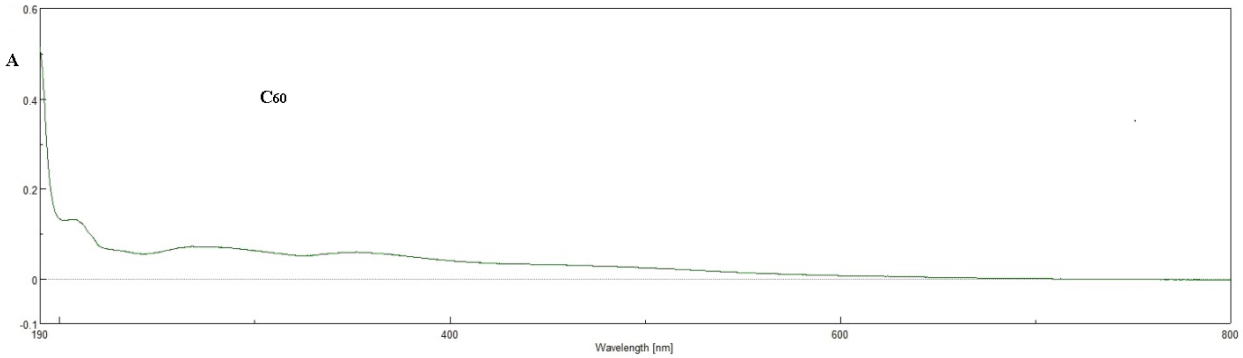

Figure S2. UV spectra of an aqueous dispersion of C_{60} fullerene at concentration $2.2 \cdot 10^{-6}$ M. Registration of absorption spectra in the UV region was carried out using a Jasco V-780 spectrophotometer (Japan). The spectra were processed using software Spectra Manager II.

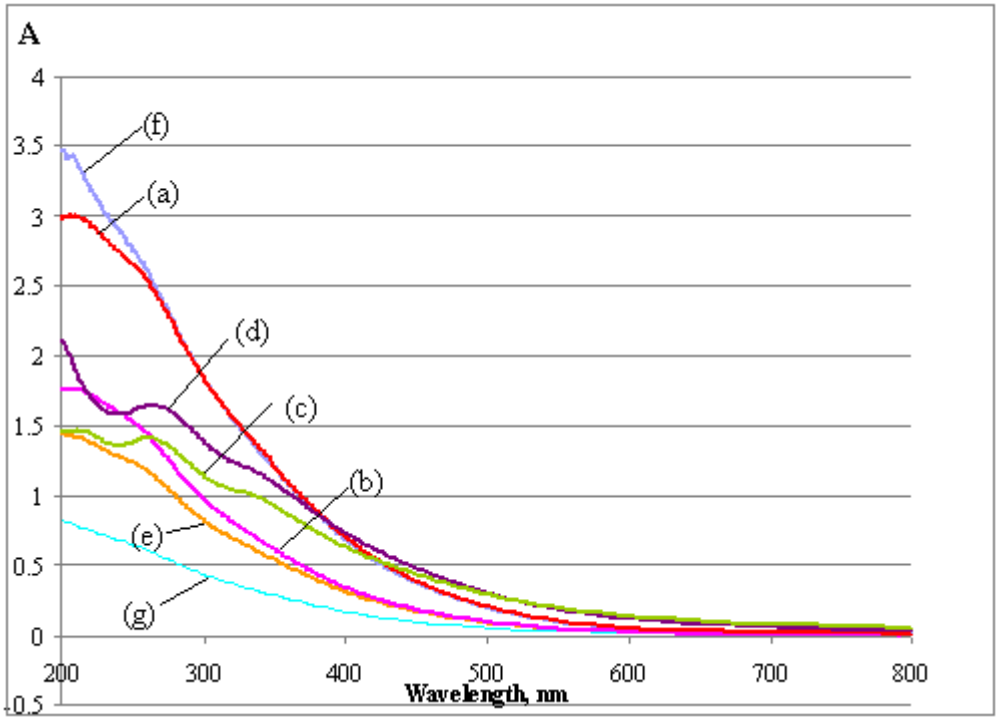

Figure S3 UV spectra of an aqueous dispersion of C_{60} fullerene *N*-substituted monoamino acid derivatives in the form of potassium salts at concentration $1.0 \cdot 10^{-4}$ M: (a) H-C_{60}-L-Ala, (b) H-C_{60}-D-Ala, (c) H-C_{60}-L-Asp, (d) H-C_{60}-D-Asp, (e) H-C_{60}-3-Aminopropionic acid, (f) H-C_{60}-4-Aminobutanoic acid, (g) H-C_{60}-6-Aminohexanoic acid. Fullerene C_{60} *N*-substituted amino acid monoderivatives for D-Asp and L-Asp are represented in the form of dipotassium salt. Registration of absorption spectra in the UV region was carried out using a Jasco V-780 spectrophotometer (Japan). The spectra were processed using software Spectra Manager II.

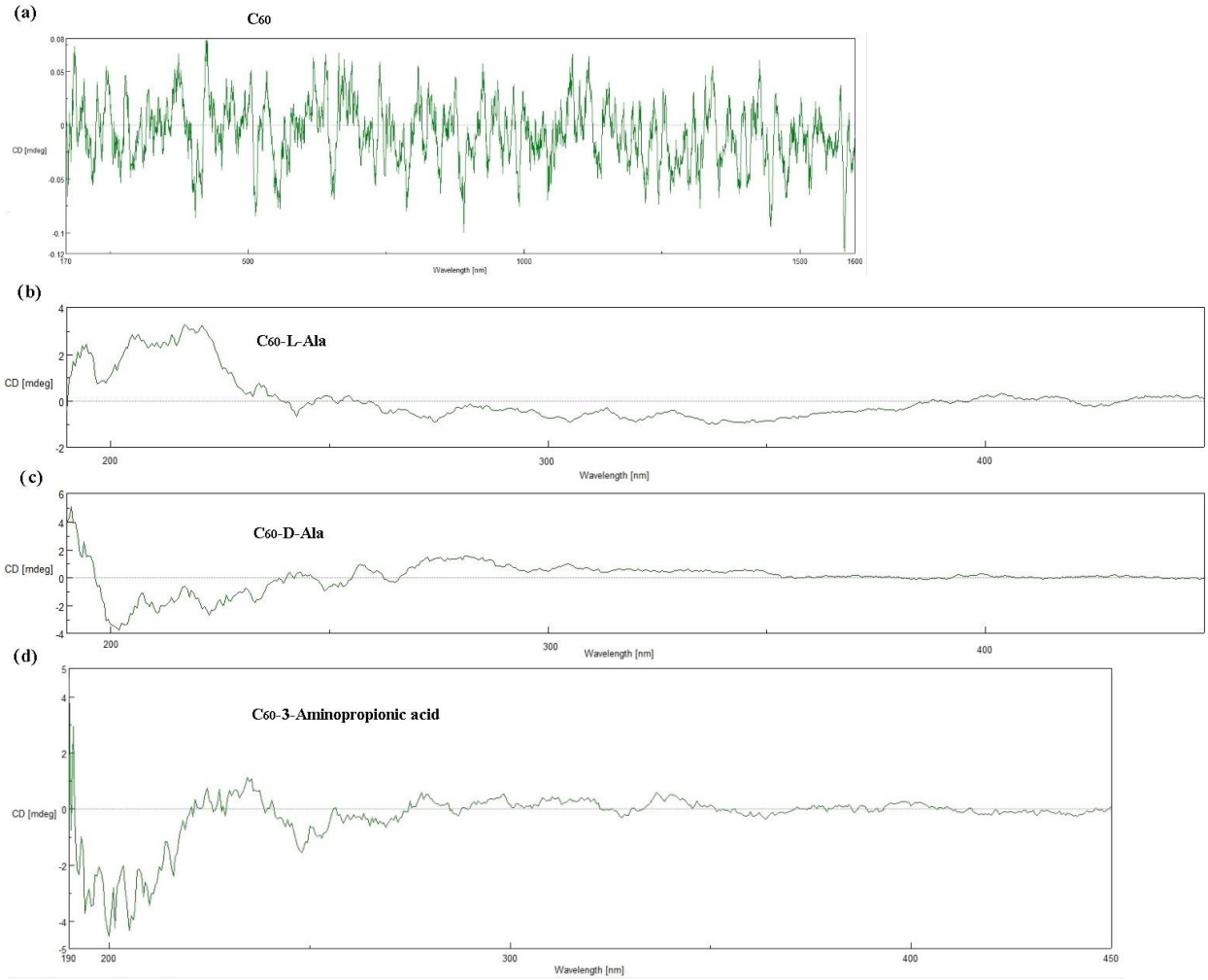

Figure S4. Circular dichroism spectra were registered using a circular dichroism spectrometer Jasco 1500 (Japan) for an aqueous dispersion of C_{60} fullerene (a) C_{60}, $2.2 \cdot 10^{-5}$ M) and solutions of its *N*-substituted amino acid monoderivatives in the form of potassium salts: b) H-C_{60}-L-Ala, $9.5 \cdot 10^{-5}$ M; c) H-C_{60}-D-Ala, $4.0 \cdot 10^{-5}$ M, d) H-C_{60}-3-Aminopropionic acid, $1.9 \cdot 10^{-4}$ M.
The spectra were processed using software Spectra Manager II.

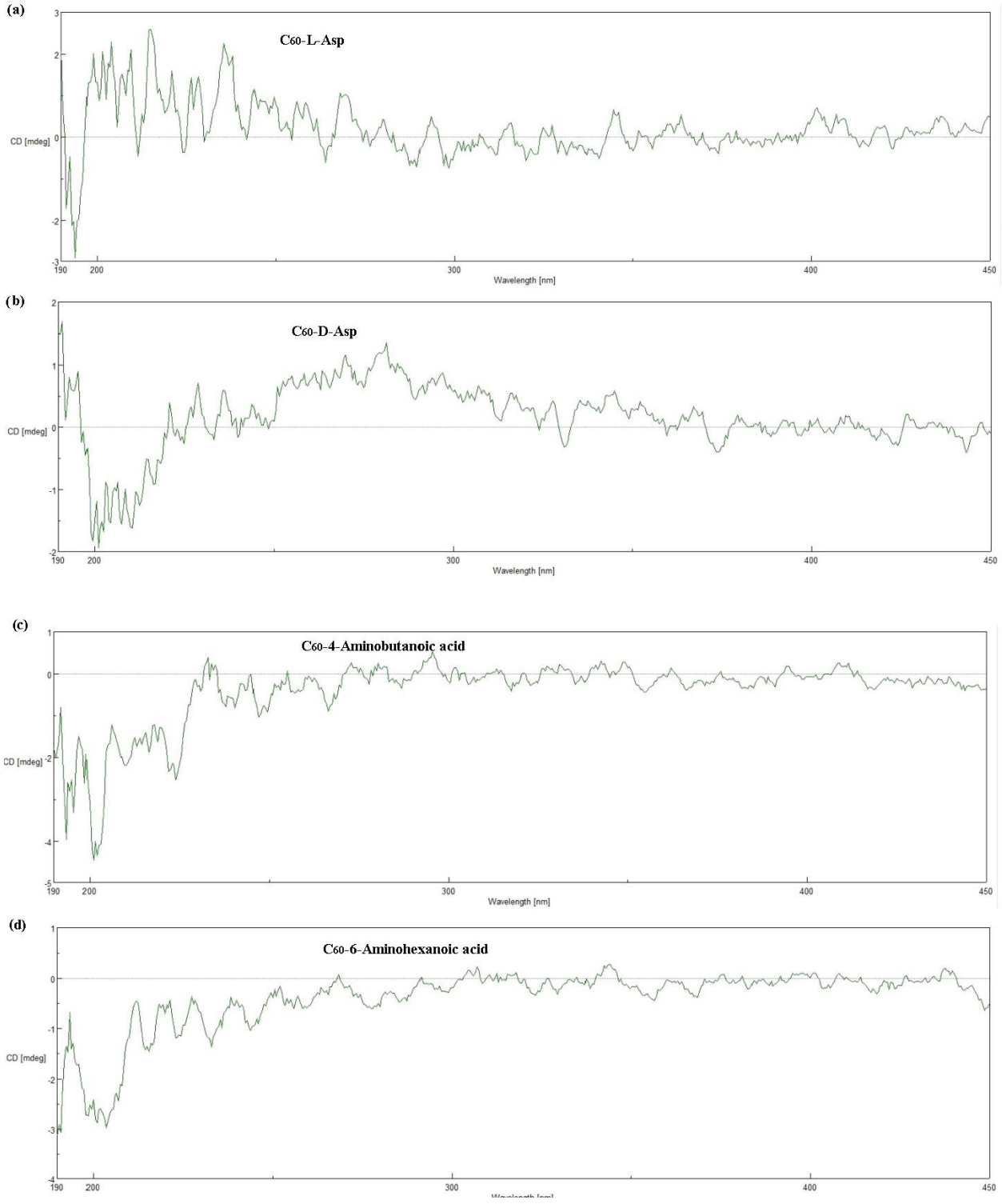

Figure S5. Circular dichroism spectra were registered using a circular dichroism spectrometer Jasco 1500 (Japan) for aqueous solutions of potassium salts of *N*-substituted amino acid monoderivatives of C_{60} fullerene: a) H-C_{60}-L-Asp, $1.2 \cdot 10^{-4}$ M, b) H-C_{60}-D-Asp, $6.7 \cdot 10^{-5}$ M, c) H-C_{60}-4-Aminobutanoic acid, $1.5 \cdot 10^{-4}$M, d) H-C_{60}-6-Aminohexanoic acid, $3.5 \cdot 10^{-5}$M. Fullerene C_{60} *N*-substituted amino acid monoderivatives for D-Asp and L-Asp are represented in the form of dipotassium salt. The circular dichroism spectrum of H-C_{60}-L-Asp exhibits large noise amplitude, but the presence of a wide band in the interval 200–250 nm corresponds to L-configuration of the compound. The spectra were processed using software Spectra Manager II.