

Supporting Information

Chiral induction in a novel self-assembled supramolecular system composed of α -cyclodextrin porous liquids, chiral silver nanoparticles and planar conjugated molecules

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I. ^1H NMR spectra of Azo-Ag NPs

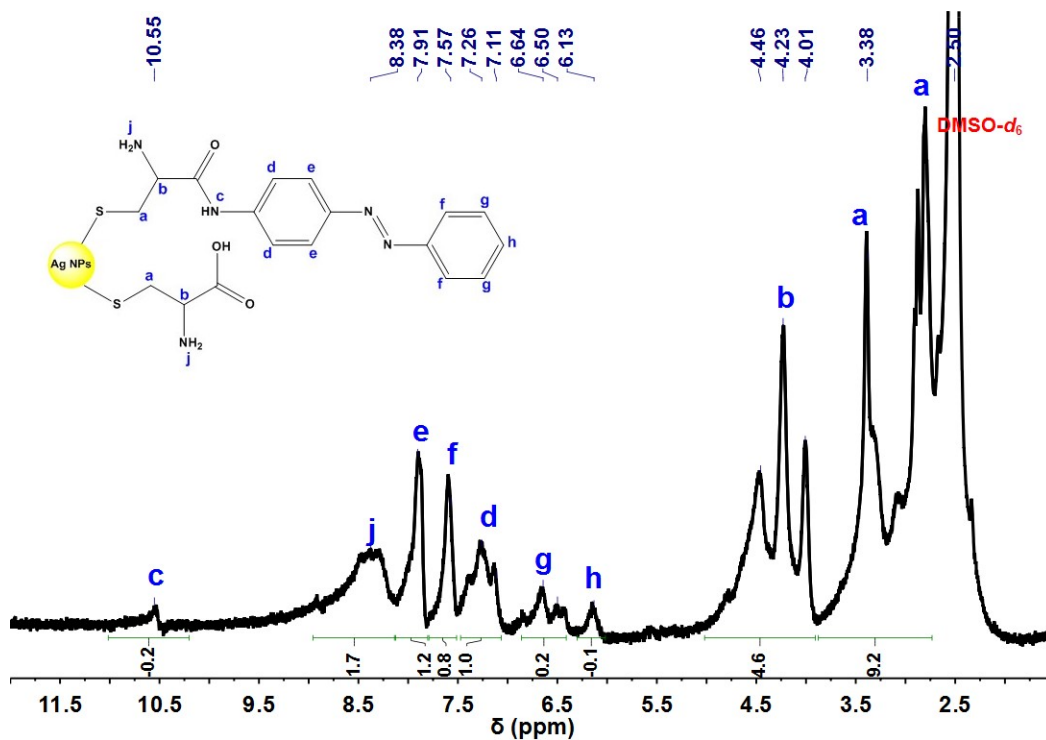


Figure S1 ^1H NMR spectra of Azo-Ag NPs

II. UV-vis and CD spectra of indigo carmine

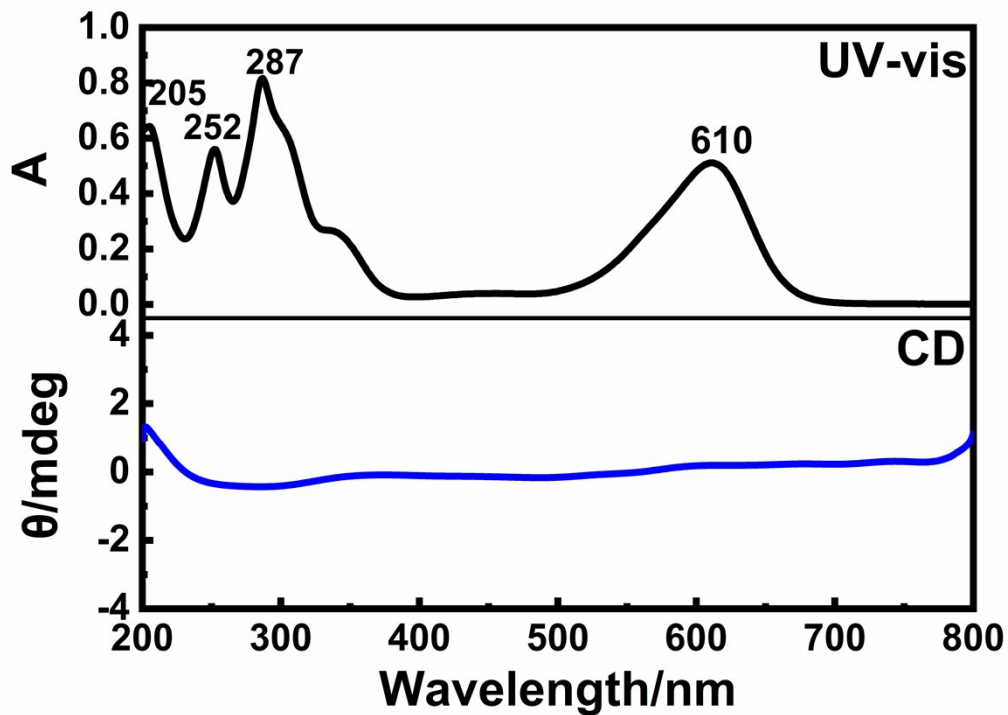


Figure S2 UV-vis and CD spectra of indigo carmine

III. CD spectra of supramolecular systems

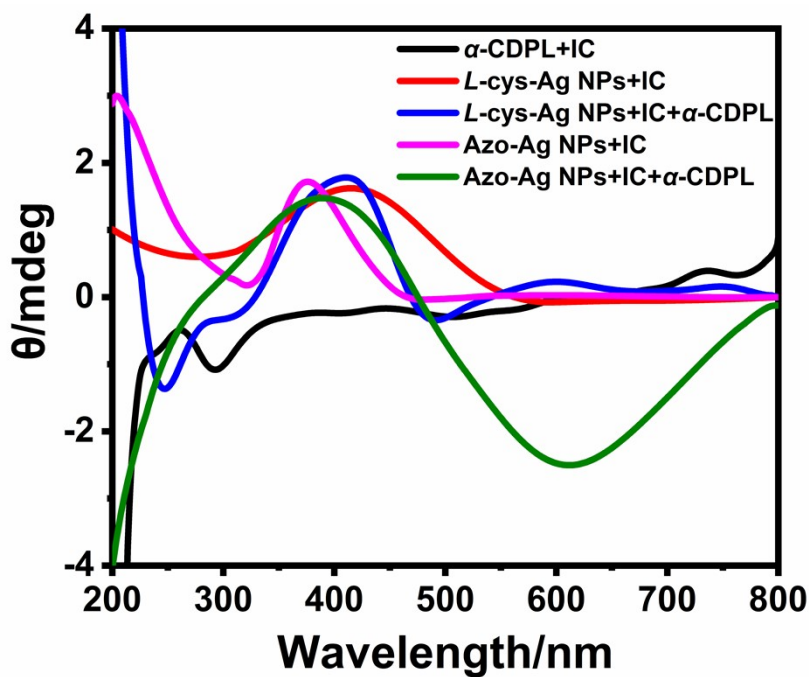


Figure S3 CD spectra of supramolecular systems

IV. Effect of pH on the chiral induction of the supramolecular system composed of indigo carmine, α -CDPL and Azo-Ag NPs

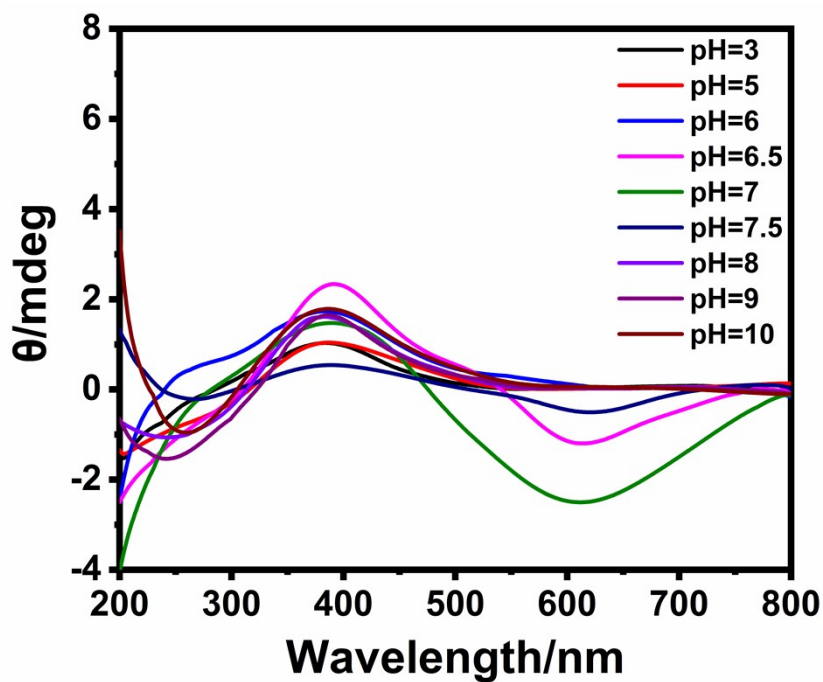


Figure S4 Effect of pH on the chiral induction of the supramolecular system composed of indigo carmine, α -CDPL and Azo-Ag NPs

V. Effect of temperature and NaCl concentrations on the chiral induction of the supramolecular system containing α -CDPL, Azo-Ag NPs and indigo carmine

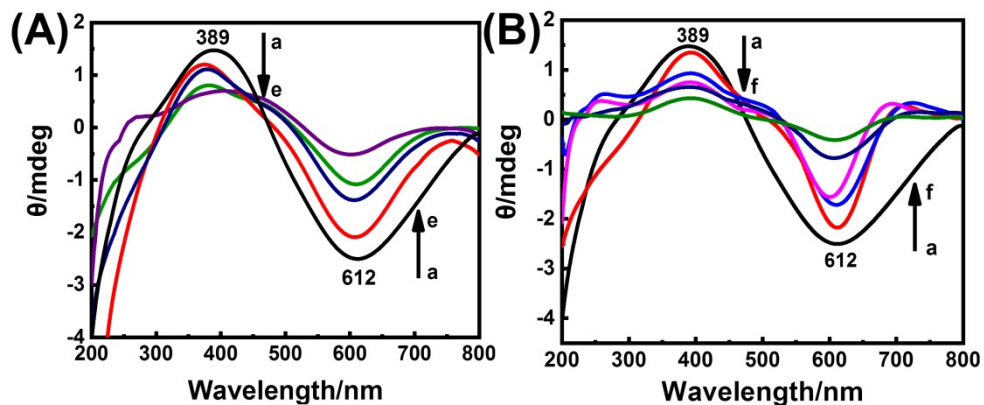


Figure S5 (A) Effect of temperature on the chiral induction of the supramolecular system containing α -CDPL, Azo-Ag NPs and indigo carmine (a→e: 25 °C, 35 °C, 45 °C, 55 °C and 65 °C); (B) Circular dichroism spectra of α -CDPL, Azo-Ag NPs and indigo carmine under different NaCl concentrations (a→f: 0, 0.02, 0.04, 0.06, 0.10, and 0.14 mol·L⁻¹).

VI. CD spectrum of the mixture solution and experiment data of the inclusion complex of α -CD and 4-aminoazobenzene

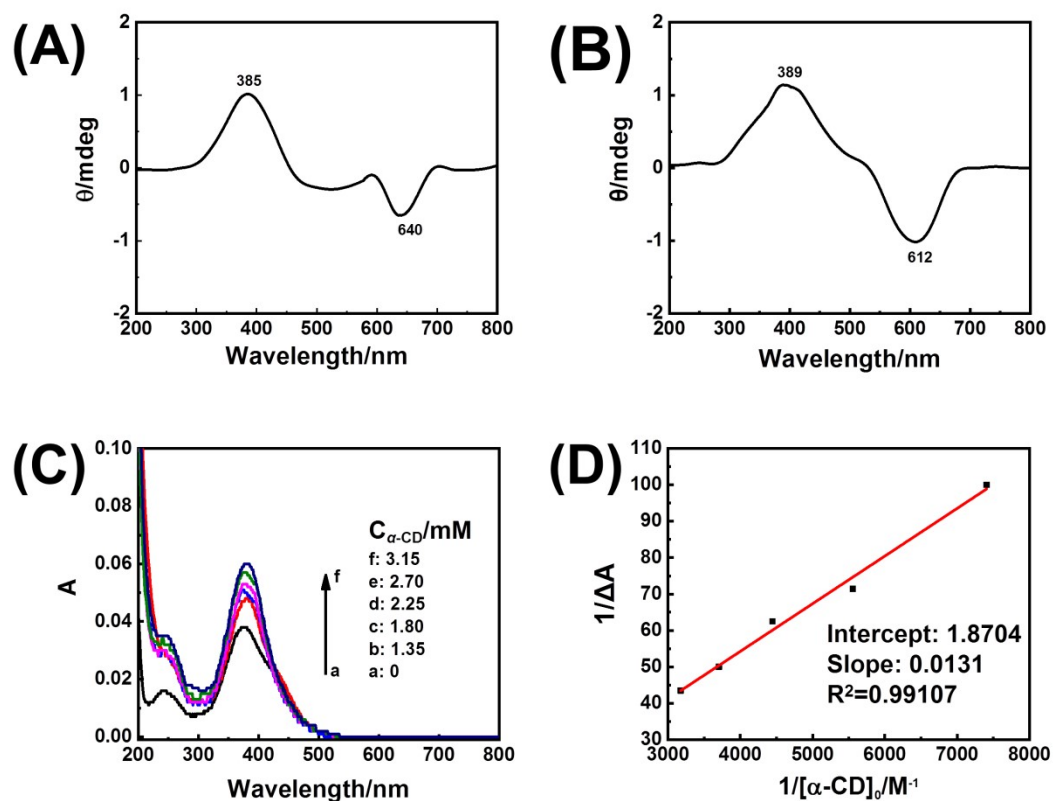


Figure S6 CD spectrum of the mixture solution of Azo-Ag NPs, α -CD and methylene blue (A) or indigo carmine (B); (C) UV-vis spectra of the mixture solution of 4-aminoazobenzene and α -CD with different concentrations; (D) relationship between $1/\Delta A$ and $1/[\alpha\text{-CD}]_0$ in the inclusion complex of α -CD and 4-aminoazobenzene.

VII. CD and UV-vis spectra of the supramolecular systems composed of CDPL-Ag NPs (or CDPL) and MB (or IC)

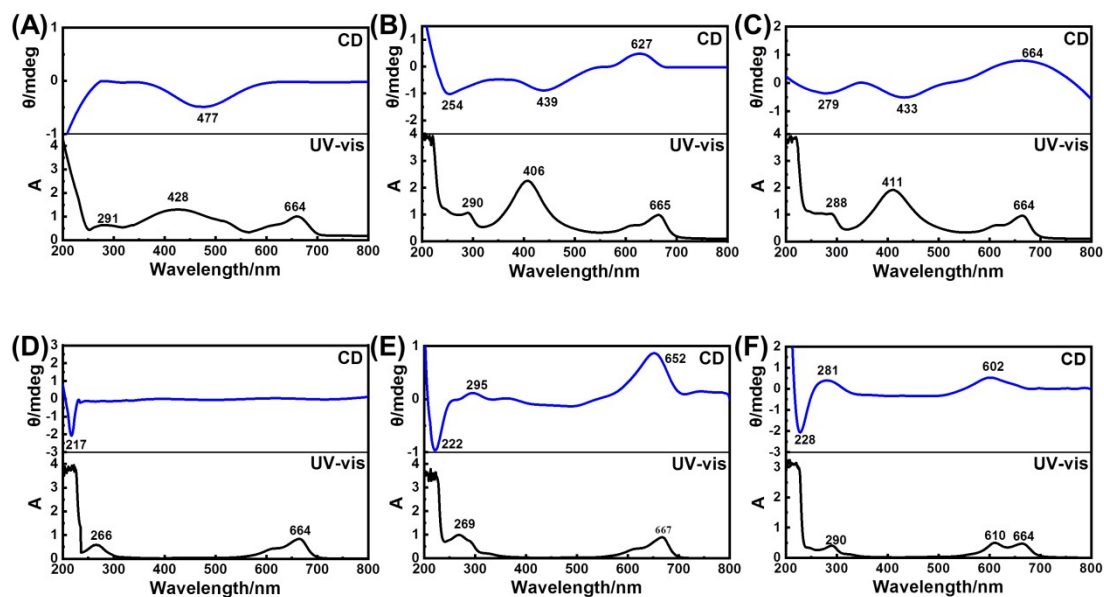


Figure S7 CD and UV-vis spectra of supramolecular systems (A, α -CDPL-Ag NPs+MB, B, β -CDPL-Ag NPs+MB, C, γ -CDPL-Ag NPs+MB, D, α -CDPL+MB, E, β -CDPL+MB and F, γ -CDPL+MB)

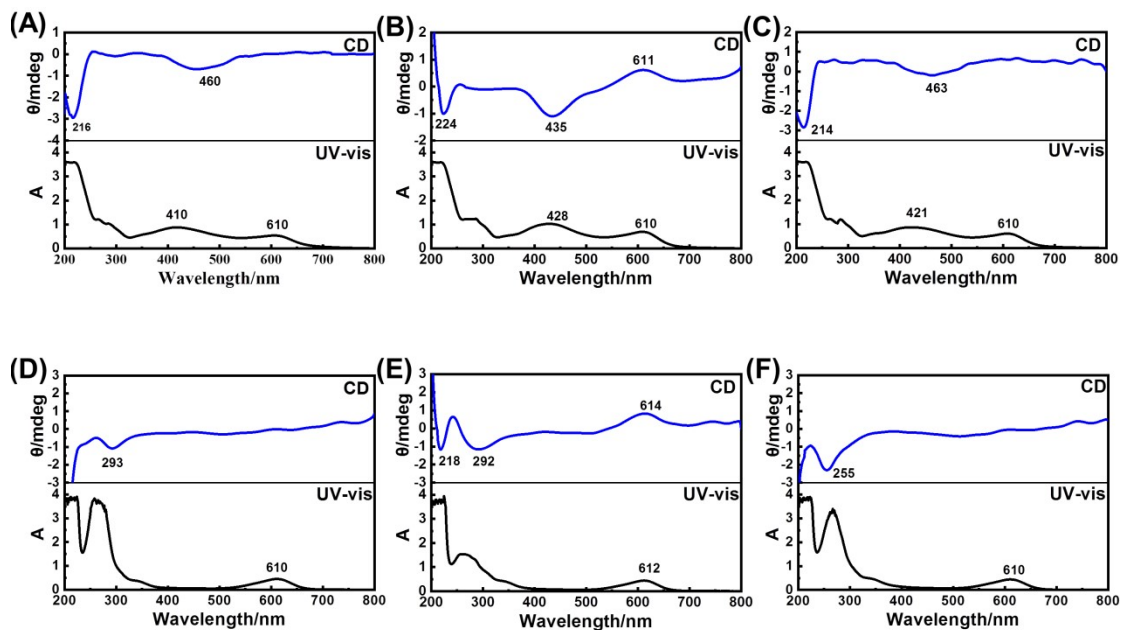


Figure S8 CD and UV-vis spectra of supramolecular systems (A, α -CDPL-Ag NPs+IC, B, β -CDPL-Ag NPs+IC, C, γ -CDPL-Ag NPs+IC, D, α -CDPL+IC, E, β -CDPL+IC and F, γ -CDPL+IC)

VIII. ^1H NMR spectra of α -CDPL and the inclusion complex of α -CDPL with 4-aminoazobenzene

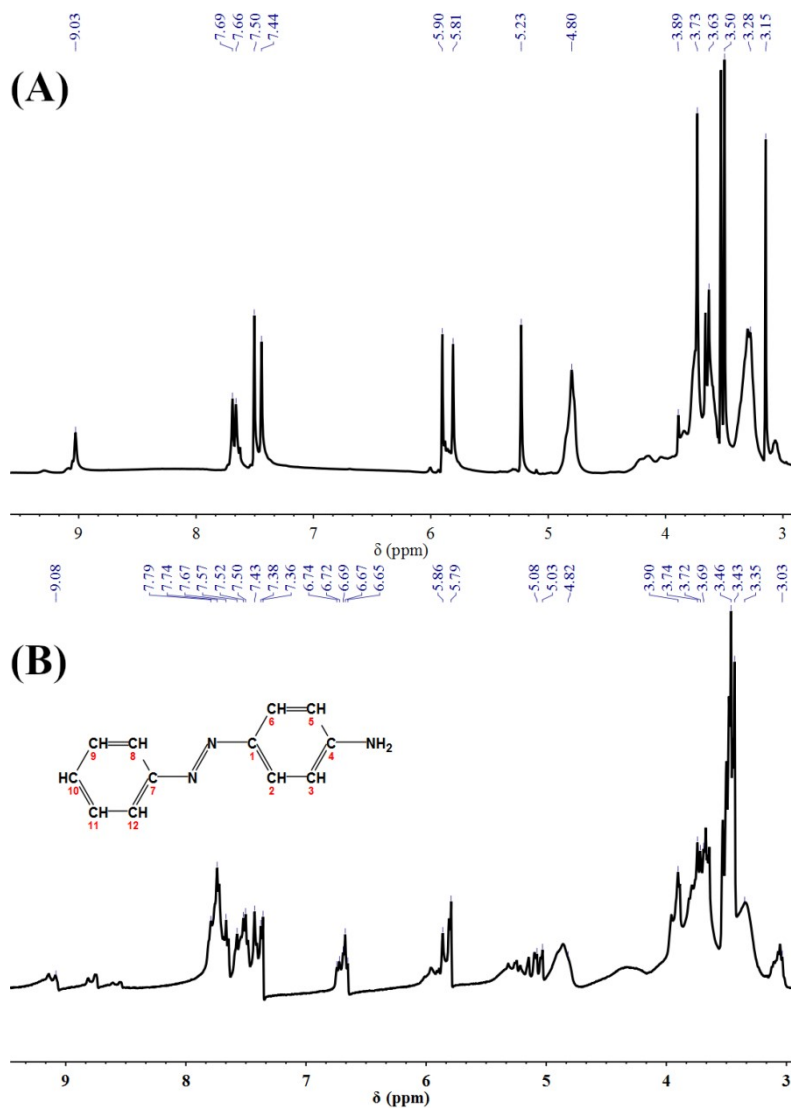


Figure S9 ^1H NMR spectra of α -CDPL (A) and the inclusion complex of α -CDPL with 4-aminoazobenzene (B);

IX. UV-vis spectra of the supramolecular system containing Azo-Ag NPs, α -CDPL and MB or IC

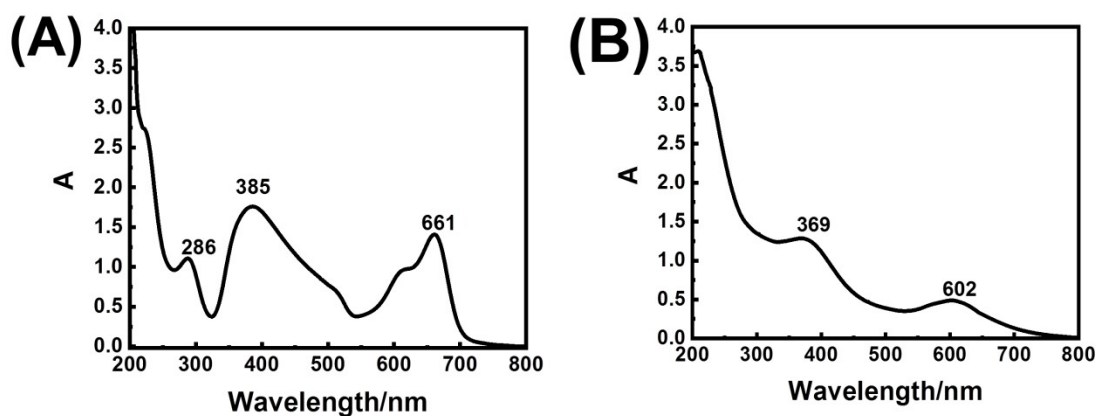


Figure S10 UV-vis spectra of the supramolecular system containing Azo-Ag NPs, α -CDPL and MB or IC ((A) Azo-Ag NPs+ α -CDPL+MB and (B) Azo-Ag NPs+ α -CDPL+IC)

X. The stretching frequencies of C=O and -OH groups in CDPLs and CDPL-Ag NPs

Table S1 The stretching frequencies of C=O and -OH groups in CDPLs and CDPL-Ag NPs

groups	α -CDPL	α -CDPL-Ag NPs	β -CDPL	β -CDPL-Ag NPs	γ -CDPL	γ -CDPL-Ag NPs
C=O/cm ⁻¹	1755	1747	1755	1745	1756	1749
-OH/cm ⁻¹	3418	3427	3378	3429	3376	3435