Quantum Control of Photoion Circular Dichroism Using Orthogonal Laser Beams

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Supplementary Information – Tabulated Data

This document provides tabulated data which are plotted in figures 4-9 of the main article.

Delay (ps)	mass 152	mass 81	mass 69
-1.93	12208.0	1349.5	302.0
-1.87	12250.9	1405.3	279.4
-1.80	12285.7	1382.6	275.2
-1.73	12252.2	1400.6	302.7
-1.67	12266.2	1411.6	290.7
-1.60	11979.0	1336.2	284.7
-1.53	12190.9	1387.3	271.4
-1.47	12173.9	1356.8	289.4
-1.40	12171.0	1351.5	295.0
-1.33	12221.5	1350.5	277.0
-1.27	12022.0	1388.3	274.9
-1.20	12009.0	1390.1	303.2
-1.13	12002.5	1360.0	290.0
-1.07	12056.5	1390.0	269.5
-1.00	11901.5	1374.5	281.5
-0.93	12279.5	1353.0	276.0
-0.87	12185.0	1411.5	268.5
-0.80	12356.5	1381.0	281.0
-0.73	12714.6	1442.8	282.4
-0.67	12996.0	1549.5	306.0
-0.60	14255.0	1626.5	358.0
-0.53	15977.5	1905.0	437.8
-0.47	17983.0	2158.0	520.0
-0.40	21406.5	2596.0	611.0
-0.33	24502.2	3128.9	771.1
-0.27	28049.5	3772.6	871.6
-0.20	31493.5	4357.0	1000.5
-0.13	34109.5	4789.0	1059.5
-0.07	34898.6	5114.9	1087.0
0.00	34980.5	5241.5	1037.5
0.07	33829.1	5281.4	965.5
0.13	31440.5	4992.0	865.5
0.20	28052.0	4526.0	753.0
0.27	25016.5	4051.5	608.7
0.33	22095.5	3553.0	552.5

Figure 4: Time Delay Count Rate

0.40	19035.0	3049.0	485.5
0.47	16600.4	2628.9	438.1
0.53	14834.5	2367.0	394.0
0.60	13895.1	2145.9	360.8
0.67	13107.5	1987.5	330.0
0.73	12905.5	1876.1	321.8
0.80	12680.8	1795.7	301.7
0.87	12567.5	1727.0	297.5
0.93	12520.0	1673.8	302.2
1.00	12348.3	1631.2	291.9
1.07	12467.0	1579.5	299.0
1.13	12509.2	1587.7	287.9
1.20	12562.7	1542.7	287.4
1.27	12385.8	1528.7	296.4
1.33	12536.0	1508.0	262.5
1.40	12577.2	1532.2	276.4
1.47	12494.0	1484.5	262.5
1.53	12572.9	1516.0	288.2
1.60	12421.8	1490.3	258.4
1.67	12760.0	1494.0	271.0
1.73	12815.7	1508.5	279.2
1.80	12577.5	1468.5	291.0
1.87	12531.0	1488.0	253.0
1.93	12585.2	1534.7	275.9
2.00	12321.7	1469.5	294.2
2.07	12282.7	1468.5	289.7

Figure 5: Single-Colour PICD

	520 nm only		260 nm only	
Mass	PICD	Std. err.	PICD	Std. err.
152	-0.166	0.021	0.149	0.019
81	0.232	0.060	0.301	0.079
69	-0.054	0.158	0.310	0.074

Figure 6: Two-Colour	PICD for 520 nm	when 260 nm is	HLP, VLP, LCP or RCP
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	260 ni	n HLP	260 ni	n VLP	260 ni	n LCP	260 nr	n RCP
Mass	PICD	Std. err.						
152	-0.03	0.062	0.053	0.045	-0.031	0.033	-0.072	0.031
81	0.484	0.185	0.444	0.122	0.428	0.08	0.414	0.07
69	-0.437	0.539	0.429	0.406	0.402	0.208	0.012	0.176

Figure 7: Two-Colour PICD for high intensity 260 nm (2.5 x 10¹¹ Wcm⁻²) when 520 nm is HLP or VLP

	520 nr	n HLP	520 nr	n VLP
Mass	PICD	Std. err.	PICD	Std. err.
152	-0.193	0.101	-0.064	0.066
81	0.015	0.123	0.033	0.098
69	-0.269	0.226	-0.222	0.167

Figure 8: Two-Colour PICD for low intensity 260 nm (5 x 10¹⁰ Wcm⁻²) when 520 nm is HLP or VLP

	520 nr	n HLP	520 nm VLP	
Mass	PICD	Std. err.	PICD	Std. err.
152	-0.136	0.094	0.34	0.067
81	-0.295	0.188	0.535	0.134
69	-0.322	0.54	0.477	0.353

Figure 9: Two-Colour PICD for low intensity 260 nm (5 x 10¹⁰ Wcm⁻²) when 520 nm is LCP or RCP

	520 nr	n LCP	520 nr	n RCP
Mass	PICD	Std. err.	PICD	Std. err.
152	0.021	0.039	-0.094	0.042
81	0.004	0.083	-0.235	0.088
69	-0.175	0.243	0.029	0.241