

## Appendix A: Supplementary Information

### **Quantitative evaluation and toxicity mechanism of synergism within three organophosphorus pesticide mixtures to *Chlorella pyrenoidosa***

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Table S1 The fitted functions, parameters ( $\alpha, \beta$ ), some statistics and the negative logarithm of the half effect concentration (pEC<sub>50</sub>) of three pesticides

Pesticides	Time (h)	Fitted function	$\alpha$	$\beta$	$R$	$RMSE$	pEC <sub>50</sub>
ACE	24	L	0.670	2.310	0.7463	0.014	0.290
	48	L	0.110	1.300	0.8385	0.026	0.084
	72	L	0.110	0.970	0.8803	0.040	0.113
	96	L	0.120	0.530	0.8826	0.036	0.226
TRI	24	L	0.010	1.870	0.8325	0.132	0.005
	48	L	0.010	0.790	0.8666	0.027	0.012
	72	L	0.140	0.560	0.8871	0.034	0.250
	96	L	0.810	0.500	0.9214	0.036	1.620
GLY	24	L	0.840	1.010	0.9659	0.020	0.831
	48	L	2.290	1.210	0.9402	0.056	1.892
	72	L	3.830	1.620	0.9418	0.087	2.364
	96	L	4.620	1.780	0.9397	0.102	2.595

Table S2 The fitted functions, parameters ( $\alpha$ ,  $\beta$ ), some statistics and the negative logarithm of the half effect concentration (pEC<sub>50</sub>) of ternary mixture systems

Rays	Time (h)	Fitted function	$\alpha$	$\beta$	$R$	RESE	pEC <sub>50</sub>
R1	24	L	0.730	0.730	0.9418	0.019	0.013
	48	L	0.730	0.6	0.9701	0.022	1.216
	72	L	1.350	0.630	0.9597	0.033	2.142
	96	L	1.830	0.690	0.9513	0.040	2.652
R2	24	L	0.440	0.680	0.9110	0.032	0.647
	48	L	0.750	0.630	0.9597	0.026	1.190
	72	L	2.540	0.950	0.9701	0.041	2.673
	96	L	3.290	1.100	0.9633	0.053	2.991
R3	24	L	0.190	0.790	0.9492	0.020	0.240
	48	L	0.750	0.630	0.9597	0.026	1.190
	72	L	1.410	0.690	0.9767	0.025	2.043
	96	L	1.860	0.720	0.9638	0.036	2.583
R4	24	L	0.510	0.760	0.9695	0.017	0.671
	48	L	1.440	0.780	0.9844	0.020	1.846
	72	L	2.330	0.930	0.9859	0.027	2.505
	96	L	3.060	1.050	0.9829	0.034	2.914
R5	24	L	0.090	0.720	0.9772	0.013	0.125
	48	L	0.640	0.620	0.9612	0.024	1.032
	72	L	1.150	0.630	0.9492	0.035	1.825
	96	L	1.640	0.660	0.9545	0.037	2.484

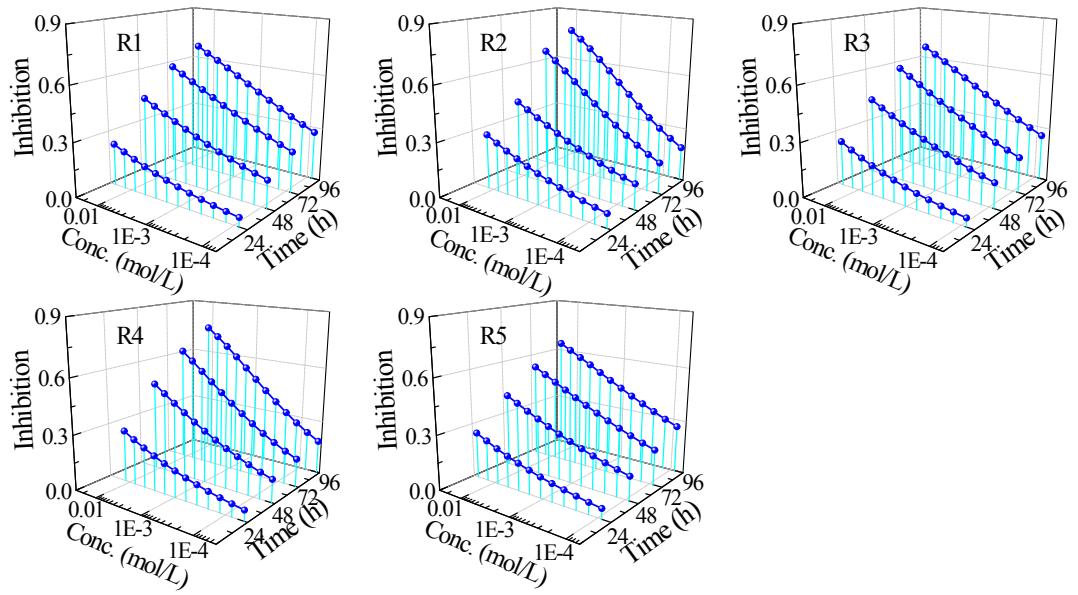


Fig. S1 CRCs of ACE-TRI-GLY mixture rays in different time