

Supplementary Information

UV properties and loading into liposomes of quinoline derivatives

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OPTIMIZED STRUCTURES

Structures of quinolines and dimer are reported in cartesian coordinates. Each atom is preceded by the corresponding atomic number

Quinoline 1

6	-3.9497	0.20063	0.298
6	-3.65093	-1.18589	-0.26126
6	-2.21255	-1.61136	-0.06916
6	-1.19869	-0.64189	0.20751
6	-1.54541	0.8389	0.31071
6	-2.93131	1.21159	-0.24283
6	0.08383	-1.08441	0.38069
6	0.36724	-2.47552	0.22699
6	-0.71173	-3.33024	-0.04864
6	-0.4878	-4.72373	-0.1984
6	0.76413	-5.23639	-0.09269
6	1.86044	-4.37988	0.16733
6	1.66811	-3.04394	0.32246
1	-3.90121	0.17325	1.38428

1	-4.28571	-1.93946	0.18943
1	-0.78963	1.39863	-0.22252
1	2.51946	-2.41566	0.50338
7	-1.97763	-2.87854	-0.17749
1	0.93119	-6.29214	-0.21042
1	-1.48399	1.14211	1.35433
1	-4.96537	0.47407	0.03778
1	-3.86591	-1.20033	-1.32771
6	1.19823	-0.13409	0.76355
6	1.97384	0.42691	-0.42477
8	1.59433	0.25781	-1.5438
6	3.22052	1.21937	-0.15373
6	3.655	1.53472	1.12931
6	4.80995	2.27705	1.31704
6	5.54139	2.70613	0.22298
6	5.11648	2.39634	-1.06128
6	3.96246	1.66015	-1.24771
1	-2.8844	1.07326	-1.32278
1	1.88761	-0.6244	1.4388
1	0.8034	0.70876	1.31945
1	6.43901	3.28011	0.36875
1	5.6837	2.72919	-1.91162
1	5.13523	2.5174	2.31302
1	3.10161	1.21336	1.99167
1	-1.34033	-5.34443	-0.40157
1	2.85138	-4.7915	0.2366
1	3.62089	1.41626	-2.23505
6	-3.31764	2.70771	-0.02071
6	-4.53454	3.05236	-0.89919
1	-5.41165	2.47155	-0.63792
1	-4.79766	4.09996	-0.78643
1	-4.32034	2.87855	-1.94991
6	-2.16505	3.63172	-0.45402
1	-1.30998	3.56173	0.2093
1	-1.82776	3.39966	-1.46049
1	-2.4918	4.6672	-0.4473
6	-3.66988	3.01356	1.44494
1	-3.88651	4.07136	1.56303
1	-4.54609	2.46521	1.77346
1	-2.85465	2.77475	2.12058

Quinoline 2

6	3.11864	-2.18392	-0.11621
6	2.0654	-3.17167	0.37493
6	0.63993	-2.72568	0.12057
6	0.33344	-1.357	-0.16129
6	1.44649	-0.32179	-0.24279
6	2.77483	-0.77697	0.38147
6	-0.97472	-1.01847	-0.37121
6	-1.98079	-2.02469	-0.25428
6	-1.55812	-3.33413	0.02426
6	-2.51558	-4.37614	0.13536

6	-3.83906	-4.1148	-0.01018
6	-4.27566	-2.79429	-0.27331
6	-3.37632	-1.78306	-0.39186
1	3.16012	-2.19485	-1.20295
1	2.19618	-4.14729	-0.07728
1	1.13383	0.59083	0.25044
1	-3.73592	-0.78868	-0.57642
7	-0.25743	-3.65425	0.19393
1	-4.56245	-4.9055	0.07838
1	1.62344	-0.06602	-1.28597
1	4.09937	-2.48306	0.23906
1	2.17911	-3.31395	1.44755
6	-1.36767	0.39165	-0.7566
6	-1.73957	1.2774	0.42926
8	-1.55534	0.91346	1.55102
6	-2.32822	2.63079	0.15262
6	-2.47146	3.14748	-1.13076
6	-3.01497	4.40736	-1.32384
6	-3.42323	5.15831	-0.235
6	-3.28486	4.65156	1.04942
6	-2.73853	3.39727	1.24139
6	3.87502	0.24505	0.14646
6	4.36222	1.0044	1.20324
6	4.41861	0.45902	-1.1185
1	2.62373	-0.8449	1.4561
1	-2.19351	0.36884	-1.4559
1	-0.55711	0.88002	-1.28547
1	-3.84717	6.13515	-0.38502
1	-3.60126	5.23414	1.89565
1	-3.11828	4.79842	-2.3198
6	5.3599	1.94801	1.00929
6	5.89103	2.14868	-0.25226
6	5.41527	1.39861	-1.31679
1	3.95907	0.85837	2.19037
1	5.71993	2.5224	1.84445
1	6.66594	2.87827	-0.40614
1	5.82154	1.54451	-2.30215
1	4.06606	-0.11214	-1.95918
1	-2.15901	2.58255	-1.98888
1	-2.15128	-5.36495	0.34236
1	-5.327	-2.59272	-0.37426
1	-2.62267	2.99473	2.22909

Quinoline 3

6	2.44938	-0.28375	-0.04187
6	1.18342	0.31451	-0.32766
6	0.0903	-0.47105	-0.45324
6	0.27915	-1.88479	-0.27466
6	1.57936	-2.36043	-0.00323
6	1.79132	-3.74975	0.16495
6	0.75662	-4.6276	0.07639
6	-0.54839	-4.15817	-0.18336

6	-0.77704	-2.82674	-0.35204
1	-1.78019	-2.49048	-0.53561
7	2.66134	-1.543	0.10795
1	0.92744	-5.68109	0.20771
6	-1.26144	0.10908	-0.79298
6	-2.16798	0.31324	0.41825
8	-1.7615	0.14179	1.52673
6	-3.58343	0.7559	0.18236
6	-4.0895	1.03981	-1.08149
6	-5.4039	1.45111	-1.23559
6	-6.22271	1.57848	-0.127
6	-5.72715	1.29748	1.13859
6	-4.41589	0.89104	1.29174
1	-1.77005	-0.51276	-1.52052
1	-1.13476	1.07662	-1.26875
1	-7.24322	1.89572	-0.24667
1	-6.36234	1.39639	2.00016
1	-5.78422	1.66969	-2.21697
1	-3.4714	0.949	-1.95494
1	2.79401	-4.07713	0.36677
1	-1.36454	-4.85553	-0.24259
1	-4.01905	0.67284	2.26434
6	1.34314	1.81831	-0.42742
6	2.82702	2.00754	-0.17723
6	3.45421	0.78763	0.04297
6	3.56029	3.18069	-0.14795
6	4.92186	3.10962	0.10333
6	5.54583	1.88487	0.32338
6	4.81485	0.71078	0.29532
1	1.05366	2.2015	-1.40278
1	0.74369	2.33653	0.31582
1	3.08879	4.13346	-0.31551
1	5.50518	4.01293	0.12936
1	6.6031	1.85474	0.51706
1	5.28052	-0.24257	0.46431

Quinoline 4

7	-5.395529	1.708754	0.062433
6	-6.133833	0.564635	0.117017
6	-5.563446	-0.713619	-0.031685
6	-4.158697	-0.799495	-0.250444
6	-3.444260	0.345611	-0.303319
6	-4.130767	1.584370	-0.135255
6	-7.528136	0.674638	0.337260
6	-8.307031	-0.438885	0.403118
6	-7.735757	-1.724039	0.254448
6	-6.398467	-1.855611	0.043484
6	-1.971321	0.599466	-0.520228
6	-1.788121	2.045602	-0.006483
6	-3.150888	2.729960	-0.231495
1	-1.335124	-0.110615	-0.003672
1	-3.697350	-1.766048	-0.364742

1	-8.364148	-2.594758	0.309278
1	-5.957386	-2.830776	-0.070005
1	-7.941480	1.659718	0.448448
1	-9.365466	-0.347089	0.569645
1	-0.971372	2.561151	-0.497495
1	-3.208730	3.169779	-1.224749
1	-3.367383	3.513488	0.483543
1	-1.567812	2.022088	1.056389
1	-1.730730	0.535596	-1.579333

Quinoline 5

6	-0.01541	3.78863	-0.01646
6	-0.54408	2.53693	-0.0082
6	0.30164	1.39358	0.00187
6	1.69234	1.58386	-0.0014
6	2.21982	2.90125	-0.01057
6	1.38841	3.97439	-0.01685
6	-0.17892	0.04867	0.00633
6	2.11403	-0.66241	0.01142
6	0.71782	-0.98489	0.01231
6	0.26458	-2.43793	-0.01585
1	-0.06128	-2.68205	-1.02514
6	1.35317	-3.42781	0.39844
6	2.65419	-3.13048	-0.33956
6	3.16954	-1.7506	0.05957
1	-0.66385	4.64639	-0.02417
1	-1.60893	2.40394	-0.01091
1	3.28824	3.01051	-0.01204
1	1.79096	4.97165	-0.02334
1	1.52458	-3.36301	1.47121
1	3.40687	-3.88095	-0.11769
1	3.54907	-1.79194	1.07868
7	2.56305	0.55081	0.00281
6	-1.65704	-0.20772	-0.00469
6	-2.32777	-0.4202	-1.20336
6	-2.38077	-0.22909	1.18278
6	-3.74583	-0.46597	1.17191
6	-3.69365	-0.65469	-1.21525
6	-4.40591	-0.67962	-0.02758
1	-1.8731	-0.0599	2.11585
1	-4.29191	-0.4815	2.09826
1	-5.46558	-0.86213	-0.03628
1	-4.19886	-0.8164	-2.15076
1	-1.77955	-0.39839	-2.12847
1	3.99992	-1.43857	-0.56212
1	2.47892	-3.16884	-1.41308
1	1.01288	-4.43884	0.19549
1	-0.60665	-2.56108	0.61568

Quinoline 6

6	-0.32393	4.46739	0.8095
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6	0.27116	3.30418	0.34337
6	1.54176	3.37921	-0.23897
6	2.16778	4.61004	-0.37284
6	1.53487	5.76114	0.07219
6	0.29012	5.70048	0.66771
6	-0.4934	2.02068	0.53594
6	-0.68154	1.10277	-0.66645
6	-1.29301	-0.2408	-0.33057
6	-0.4997	-1.33343	-0.11107
6	-1.12483	-2.59789	0.13078
7	-2.40694	-2.75583	0.154
6	-3.20102	-1.68575	-0.03265
6	-2.71209	-0.39302	-0.2697
6	1.01754	-1.22805	-0.15494
6	1.75367	-2.42425	0.46694
6	1.14942	-3.72951	-0.0594
6	-0.30189	-3.84163	0.3977
6	-4.60905	-1.87523	0.01253
6	-5.48308	-0.85875	-0.15388
6	-4.95473	0.42618	-0.37533
6	-3.6309	0.6806	-0.43618
6	3.25492	-2.30938	0.25773
6	3.83009	-2.4354	-1.00583
6	5.19813	-2.31639	-1.18202
6	6.02411	-2.06712	-0.09626
6	5.46717	-1.9396	1.16368
6	4.09597	-2.05998	1.33533
9	-5.06583	-3.09401	0.22609
9	-5.82609	1.41842	-0.52547
1	-3.30581	1.68987	-0.58494
8	2.10873	2.2145	-0.61457
6	3.44072	2.18037	-1.05917
1	1.19983	-3.75195	-1.1456
1	-0.80137	-4.68017	-0.07165
1	1.34088	-0.32463	0.34636
1	-6.54268	-1.01858	-0.11371
1	1.33135	-1.12765	-1.19207
1	1.71591	-4.58247	0.29971
1	-0.32701	-4.03076	1.46879
1	1.57618	-2.39837	1.53944
1	3.20953	-2.63359	-1.86191
1	5.61982	-2.42306	-2.16598
1	7.08708	-1.97773	-0.23259
1	6.09594	-1.74865	2.01524
1	3.6774	-1.95919	2.32161
1	-1.31481	1.64581	-1.36244
1	0.26015	0.98358	-1.175
1	3.14292	4.6831	-0.81219
1	-0.19302	6.59189	1.02253
1	2.0325	6.70731	-0.04398
1	-1.28314	4.39348	1.28735
1	3.5586	2.72504	-1.98907

1	4.11137	2.58676	-0.31138
1	3.6751	1.13965	-1.22035
8	-1.02878	1.79802	1.57824

Quinoline 7

6	-6.04751	0.63476	-0.35075
6	-4.83244	-0.1061	0.28813
6	-3.67753	0.761	-0.2615
6	-4.12994	2.20035	-0.00953
6	-5.66175	2.13901	-0.21506
6	-2.27183	0.33945	0.17463
6	-2.02255	-1.12559	-0.24447
6	-3.17539	-2.03602	0.22356
6	-4.56941	-1.54167	-0.19547
6	-1.214	1.25202	-0.44668
6	0.1689	0.67166	-0.3941
6	0.45695	-0.58871	-0.10794
6	-0.61571	-1.65378	0.17633
6	1.86377	-1.09988	-0.15353
6	2.0493	-2.20811	-1.04825
6	0.80434	-2.71982	-1.71835
6	-0.2742	-2.94107	-0.65066
7	3.17592	-2.78952	-1.26306
6	4.26573	-2.35471	-0.57593
6	4.20176	-1.30916	0.35994
6	2.93996	-0.64678	0.55641
6	5.38358	-0.96799	1.06944
6	6.55428	-1.62154	0.83183
6	6.61373	-2.65558	-0.12668
6	5.49469	-3.01473	-0.81108
6	2.82504	0.44182	1.6059
6	3.68054	1.71218	1.53848
6	-0.54743	-1.99942	1.67938
6	-4.93209	-0.06239	1.82621
6	-7.47876	0.35155	0.15464
6	-7.8973	-1.11994	0.0473
6	-8.49582	1.21052	-0.61303
1	0.4578	-1.998	-2.45473
1	7.5453	-3.16149	-0.30703
1	5.50387	-3.80514	-1.53803
1	5.36308	-0.19259	1.81019
1	7.43892	-1.35022	1.37904
1	0.07481	-3.72321	0.01648
1	0.96854	1.34923	-0.63917
1	-1.46328	1.45466	-1.48862
1	-1.21491	2.2199	0.04816
1	-3.88283	2.51597	0.99989
1	-3.65648	2.9067	-0.6824
1	-5.96225	2.6947	-1.0958
1	-6.18022	2.59221	0.62401
1	-5.30545	-2.23808	0.18852
1	-4.65197	-1.57065	-1.28049

1	-3.15274	-2.13061	1.30237
1	-3.03801	-3.04055	-0.16378
1	-2.03158	-1.13116	-1.33593
1	0.47188	-2.23961	1.96219
1	-1.1569	-2.8633	1.91835
1	-0.87362	-1.17131	2.29958
1	-2.18677	0.42144	1.25519
1	-3.70487	0.61976	-1.34351
1	-5.17932	0.92824	2.19018
1	-5.70738	-0.73557	2.17674
1	-4.01128	-0.35856	2.31166
1	-1.16697	-3.32612	-1.12694
1	1.03243	-3.6411	-2.23794
1	-6.03565	0.38281	-1.41103
1	-8.30845	2.27191	-0.50096
1	-8.47377	0.97947	-1.67549
1	1.79889	0.78177	1.65229
1	3.05843	0.01507	2.57402
1	-7.76854	-1.49242	-0.96573
1	-7.3329	-1.76103	0.71174
1	-8.94579	-1.23315	0.30661
1	-7.53611	0.63918	1.20234
1	-9.50348	1.01855	-0.257
8	4.19104	2.08295	2.55608
6	3.7984	2.57054	0.30951
6	4.10682	3.91606	0.51348
6	4.24254	4.7783	-0.55657
6	4.09141	4.30423	-1.8521
6	3.80252	2.96893	-2.06784
6	3.65128	2.10561	-0.9928
1	4.23607	4.27075	1.51745
1	4.47027	5.81472	-0.38401
1	4.20294	4.97283	-2.68703
1	3.69758	2.59292	-3.06941
1	3.43976	1.07411	-1.18634

Quinoline 8

6	-3.93298	6.00912	0.03326
6	-3.86241	5.45387	-1.23656
6	-3.66929	4.09406	-1.38563
6	-3.5489	3.27023	-0.26841
6	-3.62154	3.83644	0.99994
6	-3.81088	5.20089	1.15035
6	-3.33687	1.80121	-0.49931
8	-3.19794	1.37627	-1.60596
6	-3.28559	0.87773	0.71473
6	-3.25822	-0.59385	0.36099
6	-4.49442	-1.30326	0.24106
6	-4.43015	-2.67416	-0.05175
7	-3.25921	-3.3162	-0.25218
6	-2.14985	-2.65815	-0.1717
6	-2.08122	-1.26155	0.15525

6	-5.78004	-0.7103	0.38589
6	-6.91179	-1.45345	0.26921
6	-6.83495	-2.83955	-0.00303
6	-5.62457	-3.43212	-0.1622
6	-0.89278	-3.45608	-0.45916
6	0.28973	-2.55235	-0.78194
6	0.47797	-1.4939	0.33303
6	-0.7322	-0.54839	0.21863
6	1.81537	-0.78002	0.00914
6	3.02093	-1.71522	0.27948
6	2.76726	-3.16095	-0.22653
6	1.58348	-3.30169	-1.19207
6	4.26886	-1.03412	-0.29462
6	4.58577	0.33596	0.36461
6	3.35953	1.24463	0.16634
6	2.05221	0.59298	0.65578
6	5.61319	-1.76527	-0.28782
6	6.6428	-0.63534	-0.52431
6	5.87428	0.71669	-0.4283
6	0.47486	-2.0741	1.76497
6	4.91089	0.21848	1.86809
6	6.78141	1.86618	0.06284
6	6.06732	3.21804	0.18377
6	7.98836	2.02962	-0.87422
1	-0.67705	-4.10042	0.38928
1	-7.73886	-3.41551	-0.09004
1	-5.52892	-4.47926	-0.38054
1	-5.87283	0.34175	0.57547
1	-7.87392	-0.98581	0.37812
1	-0.72238	0.12917	1.06404
1	-0.63089	0.06836	-0.67134
1	1.37224	-4.35833	-1.33221
1	1.89201	-2.93481	-2.16662
1	2.60504	-3.80996	0.62723
1	3.6517	-3.55196	-0.71679
1	3.15292	-1.78335	1.35384
1	-1.11128	-4.11464	-1.2919
1	-0.00861	-1.97964	-1.65778
1	0.78055	-1.31397	2.47713
1	1.136	-2.9208	1.88728
1	-0.51656	-2.39717	2.05988
1	1.79069	-0.59604	-1.06565
1	1.2358	1.26535	0.41203
1	2.06285	0.50919	1.73886
1	3.48167	2.19397	0.67411
1	3.25603	1.47246	-0.89306
1	5.78607	-2.26289	0.66174
1	5.67279	-2.5286	-1.05491
1	4.05226	-0.81264	-1.34097
1	4.09572	-0.20533	2.43971
1	5.78519	-0.39443	2.05437
1	5.11207	1.19932	2.28568

1	7.12227	-0.73858	-1.49092
1	7.43578	-0.67642	0.21599
1	5.54641	0.98612	-1.43214
1	7.66481	2.27729	-1.88253
1	8.63263	2.83331	-0.53047
1	7.16743	1.60348	1.0455
1	5.57324	3.48662	-0.7464
1	5.32341	3.22529	0.96955
1	6.78268	4.00259	0.41254
1	-3.61014	3.65214	-2.36143
1	-3.52762	3.22804	1.87981
1	-3.9571	6.0806	-2.10482
1	-3.86297	5.62828	2.13535
1	-4.08226	7.06768	0.14998
1	-2.40958	1.15243	1.28916
1	-4.12663	1.09469	1.35934
1	8.5919	1.13151	-0.93132

Dimer

6	5.0317	-3.85126	1.65742
6	3.97761	-3.31408	0.91705
6	3.30041	-4.14133	0.02916
6	3.65286	-5.47433	-0.1131
6	4.69481	-5.99435	0.63432
6	5.38546	-5.18017	1.51952
6	3.64041	-1.8617	1.10089
8	4.35016	-1.16846	1.7683
6	2.37584	-1.27038	0.45055
6	2.42664	0.25869	0.56854
6	1.69782	1.13306	1.46143
6	2.1347	2.48249	1.56167
7	3.09072	3.03474	0.78291
6	3.67566	2.24249	-0.05241
6	3.39682	0.86198	-0.18574
6	1.60595	3.30712	2.5927
6	0.73014	2.81366	3.50626
6	0.34221	1.45316	3.44846
6	0.83622	0.63968	2.47972
6	4.36293	0.25891	-1.16318
6	5.1559	1.4417	-1.6577
6	4.75611	2.59596	-0.98421
6	5.35354	3.82054	-1.2376
6	6.35673	3.87769	-2.19077
6	6.75167	2.72882	-2.87013
6	6.15717	1.50246	-2.60952
1	0.5382	-0.39017	2.47695
1	-0.31511	1.05382	4.19908
1	0.33682	3.44698	4.28046
1	1.9322	4.32972	2.62193
1	5.01361	-0.47983	-0.67008
1	3.8963	-0.33619	-1.95764

1	5.04615	4.69996	-0.70259
1	6.83705	4.81388	-2.41046
1	7.53183	2.79655	-3.60695
1	6.47598	0.62194	-3.13834
1	2.36312	-1.53895	-0.596
1	1.49512	-1.75037	0.88619
1	2.50392	-3.75722	-0.57446
1	3.12047	-6.10982	-0.80119
1	4.96795	-7.02843	0.52352
1	6.1966	-5.57812	2.10085
1	5.56528	-3.21572	2.33657
6	-0.18744	2.04273	0.09456
6	-1.01676	0.93098	0.14264
6	-1.11404	0.06182	-0.9443
6	-0.45222	0.37972	-2.12051
6	0.28683	1.55022	-2.20961
6	0.41195	2.38609	-1.10927
1	-1.51661	0.68154	1.06552
6	-1.92257	-1.20696	-0.77362
1	-0.51714	-0.27553	-2.9733
1	0.77847	1.80328	-3.13323
1	0.9798	3.29443	-1.19378
1	-1.71346	-1.85881	-1.61854
6	-1.33115	-1.91045	0.43661
6	-3.43123	-1.01569	-0.72725
1	-0.15259	2.70056	0.93577
8	-1.88928	-2.66746	1.16187
1	-0.2671	-1.68357	0.56339
6	-4.28202	-2.15249	-0.91565
6	-5.65494	-2.03343	-0.62871
7	-6.19701	-0.9077	-0.11597
6	-5.44521	0.1449	-0.14999
6	-4.06632	0.18588	-0.55102
6	-3.81343	-3.41019	-1.41172
6	-5.84924	1.49772	0.21914
6	-3.58653	1.62069	-0.56935
6	-4.65823	-4.45119	-1.60798
1	-2.77461	-3.53773	-1.64489
1	-4.28382	-5.38203	-1.99828
6	-6.04056	-4.32059	-1.30787
6	-6.51545	-3.14767	-0.82453
1	-6.70091	-5.1577	-1.45652
1	-7.5529	-3.02387	-0.56948
1	-3.35373	1.93197	-1.58216
1	-2.66006	1.82559	-0.01215
6	-4.80188	2.31695	-0.05305
6	-4.92204	3.70976	0.11438
6	-6.09016	4.19806	0.57819
1	-4.12426	4.39572	-0.1151
1	-6.18919	5.26543	0.68958
6	-7.16915	3.3225	0.91668
6	-7.06061	1.9953	0.79823

1	-8.06819	3.75888	1.31349
1	-7.85367	1.32937	1.09616

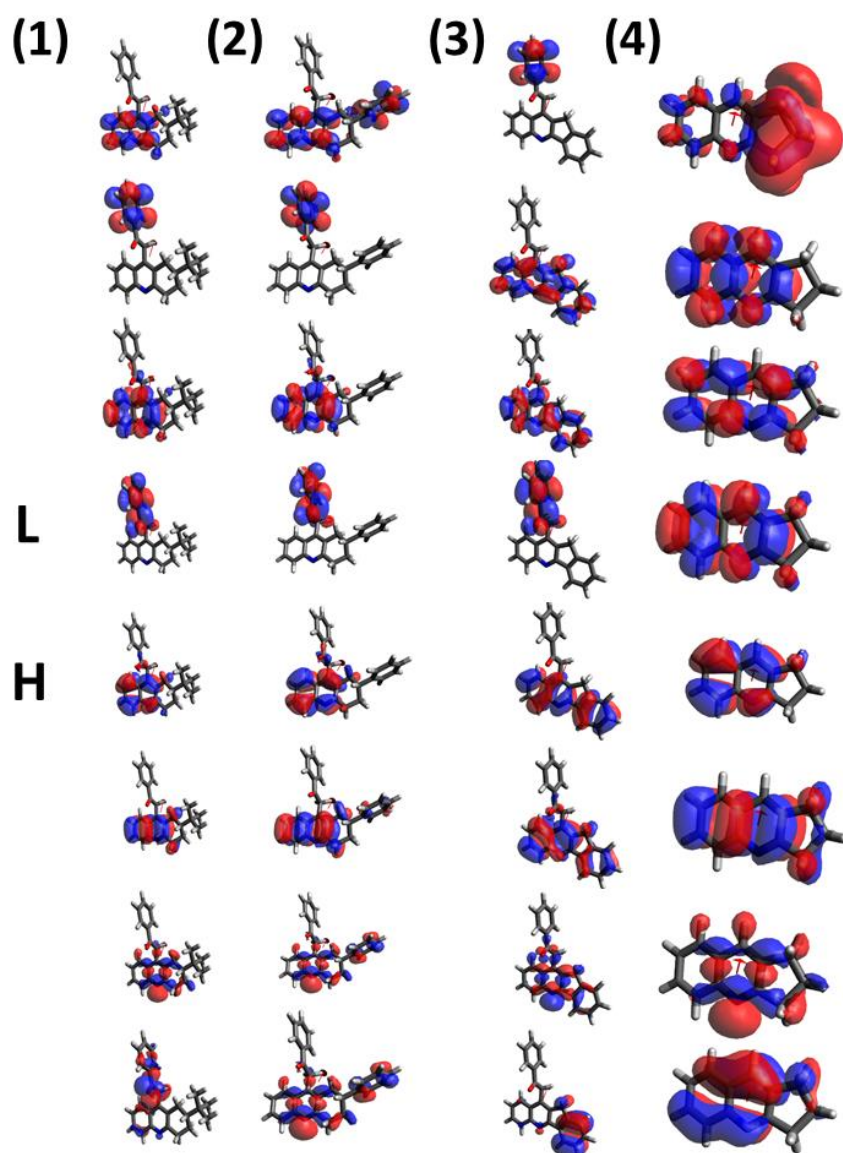


Figure S1. Schematic view of the molecular orbitals for species **1-4** involved in the transitions reported in Table S1. H and L stand for HOMO and LUMO respectively. The orbitals are reported following the energy sequence.

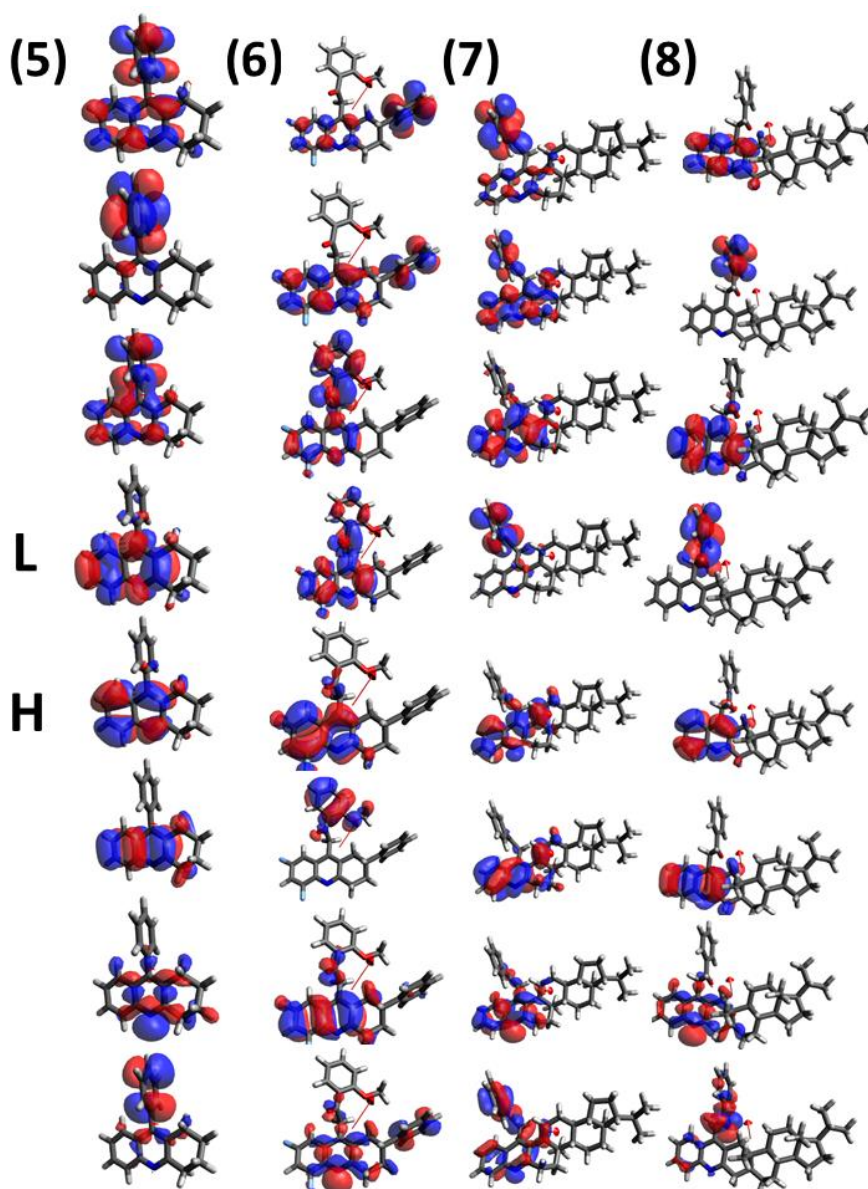


Figure S2. Schematic view of the molecular orbitals for species **5-8** involved in the transitions reported in Table S1. H and L stand for HOMO and LUMO respectively. The orbitals are reported following the energy sequence.

Table S1.**Quinoline 1**Ground state dipole moment $|\mu_0| = 4.24$ Debye

Transition Energy (eV)	Composition	Oscillator strength
3.8	H-3 \rightarrow L H \rightarrow L	0.0006
4.0	H-3 \rightarrow L H \rightarrow L	0.0017
4.2	H-2 \rightarrow L H-2 \rightarrow L+1	0.0024
4.3	H-1 \rightarrow L	0.0022
4.4	H-2 \rightarrow L	0.0014
4.5	H \rightarrow L+2 H \rightarrow L+3	0.0782
4.54	H-1 \rightarrow L+2	0.0639
4.9	H-5 \rightarrow L+2 H-4 \rightarrow L+2	0.0000
5.1	H-3 \rightarrow L+2	0.0210

Quinoline 2Ground state dipole moment $|\mu_0| = 4.15$ Debye

Transition Energy (eV)	Composition	Oscillator strength
3.8	H-5 \rightarrow L H \rightarrow L	0.0004
4.0	H-5 \rightarrow L H \rightarrow L	0.0020
4.2	H-3 \rightarrow L+1 H-2 \rightarrow L	0.0023
4.3	H-1 \rightarrow L	0.0033

4.49	H \rightarrow L+2	0.0783
4.5	H-2 \rightarrow L+1	0.0003
4.54	H-1 \rightarrow L+1 H \rightarrow L+3	0.0660
4.6	H-3 \rightarrow L H \rightarrow L+3	0.0001
4.86	H-4 \rightarrow L	0.0000

Quinoline 3

Ground state dipole moment $|\mu_0| = 4.58$ Debye

Transition Energy (eV)	Composition	Oscillator strength
3.8	H-4 \rightarrow L H-1 \rightarrow L H \rightarrow L	0.0002
3.9	H-4 \rightarrow L H-1 \rightarrow L H \rightarrow L	0.0004
4.1	H-4 \rightarrow L H-1 \rightarrow L H \rightarrow L H \rightarrow L+1	0.0734
4.16	H \rightarrow L+1 H-1 \rightarrow L H-1 \rightarrow L+1	0.2267
4.2	H-2 \rightarrow L+1	0.0077
4.26	H-1 \rightarrow L+1 H \rightarrow L+1	0.0426
4.6	H-2 \rightarrow L	0.0001
4.7	H-3 \rightarrow L+1	0.0040
4.8	H-3 \rightarrow L	0.0003

4.9	H-4 \rightarrow L+2	0.1646
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Quinoline 4

Ground state dipole moment $|\mu_0| = 1.9$ Debye

Transition Energy (eV)	Composition	Oscillator strength
4.3	H-2 \rightarrow L	0.0023
4.57	H-1 \rightarrow L H \rightarrow L H \rightarrow L+1	0.0688
4.6	H-1 \rightarrow L H \rightarrow L H \rightarrow L+1	0.0367
	H-1 \rightarrow L+1	
5.3	H-2 \rightarrow L+1	0.0002
5.9	H \rightarrow L+2 H-1 \rightarrow L H-1 \rightarrow L+1 H-1 \rightarrow L+2	0.6170
6.0	H-1 \rightarrow L+1 H \rightarrow L+2 H \rightarrow L+1 H-3 \rightarrow L	0.2482
6.2	H-2 \rightarrow L+2	0.0046
6.3	H-3 \rightarrow L H-1 \rightarrow L+2 H \rightarrow L+3	0.1578
6.5	H-1 \rightarrow L+2 H \rightarrow L+1 H-3 \rightarrow L+1	0.4160
6.7	H-3 \rightarrow L H \rightarrow L+2	0.0548

Quinoline 5

Ground state dipole moment, $|\mu_0| = 2.3$ Debye

Transition Energy (eV)	Composition	Oscillator strength
4.2	H-2 \rightarrow L	0.0014
4.5	H \rightarrow L	0.0632
4.54	H-1 \rightarrow L	0.0475
5.0	H-3 \rightarrow L	0.0025
5.18	H-2 \rightarrow L+1 H-2 \rightarrow L+2	0.0000
5.23	H-4 \rightarrow L	0.0014
5.24	H \rightarrow L+2	0.0041
5.3	H \rightarrow L+1 H \rightarrow L+2	0.0393
5.5	H-4 \rightarrow L+2 H-3 \rightarrow L+1	0.0043
5.6	H-1 \rightarrow L+1 H-1 \rightarrow L+2	0.0140

Quinoline 6

Ground state dipole moment, $|\mu_0| = 6.8$ Debye

Transition Energy (eV)	Composition	Oscillator strength
4.1	H \rightarrow L H \rightarrow L+1 H-5 \rightarrow L+1 H -5 \rightarrow L	0.0001
4.26	H \rightarrow L	0.0852
4.32	H-3 \rightarrow L H-3 \rightarrow L+1	0.0061
4.4	H \rightarrow L+2	0.0025

4.54	H-2 \rightarrow L H-1 \rightarrow L H-1 \rightarrow L+1	0.0392
4.57	H-4 \rightarrow L	0.0431
4.73	H \rightarrow L+2	0.0016
4.88	H \rightarrow L+1	0.0002
4.92	H-4 \rightarrow L+2 H-3 \rightarrow L+1	0.0057
5.0	H-1 \rightarrow L+1 H-1 \rightarrow L+2	0.0020

Quinoline 7

Ground state dipole moment, $|\mu_0| = 2.9$ Debye

Transition Energy (eV)	Composition	Oscillator strength
3.8	H -3 \rightarrow L H \rightarrow L	0.0016
4.16	H \rightarrow L+2 H-2 \rightarrow L+2 H-1 \rightarrow L+1	0.0501
4.18	H \rightarrow L H-3 \rightarrow L H \rightarrow L+1	0.0005
4.39	H -1 \rightarrow L	0.0140
4.45	H-2 \rightarrow L+1 H \rightarrow L+1 H \rightarrow L+2	0.0477
4.48	H-1 \rightarrow L+2 H \rightarrow L+2	0.0283
4.7	H-2 \rightarrow L	0.0047
4.9	H-3 \rightarrow L+1	0.0185

4.93	H-4 \rightarrow L	0.0200
4.99	H-2 \rightarrow L+2	0.1412

Quinoline 8

Ground state dipole moment, $|\mu_0| = 4.1$ Debye

Transition Energy (eV)	Composition	Oscillator strength
3.8	H -3 \rightarrow L H \rightarrow L	0.0007
4.0	H -3 \rightarrow L H \rightarrow L	0.0022
4.2	H-2 \rightarrow L+1	0.0015
4.3	H \rightarrow L+2	0.0027
4.4	H-2 \rightarrow L+1	0.0006
4.5	H \rightarrow L+1	0.0775
4.55	H-1 \rightarrow L+1	0.0712
4.9	H-3 \rightarrow L	0.0175
5.1	H-3 \rightarrow L+1	0.0205
5.2	H-2 \rightarrow L+3	0.0006

Table S2. Transition energies (eV) and oscillator strengths for the first twenty transitions of quinolines

Quinoline 1.

Gas-phase	Hexane	2.Propanol	Methanol	Chloroform
3.8224 0.0006	3.8740 0.0006	3.9667 0.0008	3.9729 0.0008	3.9278 0.0007
4.0107 0.0017	4.0707 0.0029	4.1869 0.0081	4.1948 0.0088	4.1375 0.0050
4.2253 0.0024	4.2621 0.0036	4.3276 0.0104	4.3317 0.0114	4.3008 0.0061
4.2920 0.0022	4.3588 0.0061	4.4464 0.1460	4.4442 0.1502	4.4279 0.0258
4.4516 0.0014	4.4816 0.1030	4.4668 0.0955	4.4703 0.1102	4.4622 0.1307
4.4986 0.0782	4.5354 0.0912	4.5411 0.0864	4.5451 0.0764	4.5311 0.1145
4.5430 0.0639	4.5556 0.0006	4.7526 0.0013	4.7657 0.0014	4.6696 0.0009
4.9344 0.0177	4.8958 0.0245	4.8244 0.0418	4.8196 0.0432	4.8545 0.0336
5.1075 0.0210	5.0846 0.0297	5.0397 0.0598	5.0368 0.0632	5.0585 0.0434
5.2262 0.0008	5.2660 0.0018	5.1861 0.4079	5.1773 0.4096	5.2431 0.3874
5.2437 0.0000	5.3238 0.3397	5.3388 0.0145	5.3433 0.0178	5.3088 0.0051

5.4019 0.2835	5.3549 0.0013	5.3902 0.0057	5.3793 0.0057	5.4596 0.0051
5.5788 0.0055	5.5558 0.0042	5.4484 0.0082	5.4359 0.0086	5.4715 0.0001
5.6244 0.0010	5.6384 0.0044	5.5405 1.5502	5.5276 1.5606	5.5279 0.0063
5.6460 0.0028	5.6446 0.0028	5.5546 0.0014	5.5676 0.0002	5.6264 1.4616
5.7114 0.0011	5.7313 0.1404	5.7656 0.0048	5.7731 0.0055	5.7156 0.0032
5.7426 0.0032	5.7574 1.1152	5.8732 0.0429	5.8729 0.0455	5.8519 0.0018
5.7892 0.0017	5.8122 0.0037	5.9371 0.0009	5.9505 0.0008	5.8763 0.0324
5.8648 0.4688	5.8818 0.0439	5.9758 0.0026	5.9866 0.0031	5.9081 0.0016
5.9037 0.5837	5.9221 0.0009	6.0443 0.3216	6.0392 0.3278	6.0732 0.0061

Quinoline 2.

Gas-phase	Hexane	2.Propanol	Methanol	Chloroform
3.8471 0.0004	3.8944 0.0004	3.9781 0.0006	3.9835 0.0007	3.9432 0.0005
4.0372 0.0020	4.0964 0.0033	4.2037 0.0090	4.2104 0.0098	4.1594 0.0057
4.2328 0.0023	4.2682 0.0033	4.3339 0.0099	4.3380 0.0110	4.3066 0.0057
4.3395 0.0033	4.3997 0.0102	4.4411 0.1425	4.4390 0.1452	4.4510 0.0806
4.4930 0.0783	4.4763 0.1010	4.4772 0.1334	4.4783 0.1465	4.4612 0.0957
4.5024 0.0003	4.5345 0.0925	4.5541 0.0547	4.5589 0.0476	4.5354 0.0982
4.5407 0.0666	4.5978 0.0004	4.6830 0.0000	4.6853 0.0000	4.6651 0.0000
4.6404 0.0001	4.6612 0.0002	4.7913 0.0011	4.8026 0.0012	4.7199 0.0008
4.8678 0.0000	4.8863 0.0004	4.8214 0.0418	4.8167 0.0431	4.8509 0.0336
4.9304 0.0176	4.8919 0.0240	4.8627 0.0018	4.8583 0.0018	4.8935 0.0017
4.9858 0.0015	4.9399 0.0017	4.9211 0.0001	4.9233 0.0001	4.9067 0.0001
5.0684 0.0189	5.0495 0.0262	5.0158 0.0514	5.0139 0.0544	5.0291 0.0377
5.2178 0.0008	5.2056 0.0060	5.1283 0.0086	5.1236 0.0088	5.1597 0.0075
5.2505 0.0042	5.2575 0.0013	5.1826 0.4097	5.1739 0.4125	5.2387 0.3843
5.2940 0.0001	5.3190 0.3343	5.3317 0.0126	5.3365 0.0157	5.3007 0.0041
5.3972 0.2777	5.4000 0.0002	5.3597 0.0074	5.3502 0.0073	5.4213 0.0073
5.5199 0.0020	5.5100 0.0062	5.4176 0.0098	5.4067 0.0102	5.4887 0.0076
5.5957 0.0052	5.5190 0.0035	5.5115 1.2901	5.5009 1.6068	5.5085 0.0001
5.6243 0.0034	5.5910 0.0053	5.5195 0.3615	5.5182 0.0550	5.5181 0.0099
5.6774 0.0175	5.6813 0.7835	5.5836 0.0001	5.5951 0.0000	5.5905 1.5164

Quinoline 3.

Gas-phase	Hexane	2.Propanol	Methanol	Chloroform
3.8298 0.0002	3.8891 0.0002	3.9881 0.0001	3.9944 0.0001	3.9477 0.0001
3.9249 0.0004	3.9896 0.0024	4.0192 0.7147	4.0136 0.7340	4.0526 0.4808
4.1327 0.0734	4.1087 0.4277	4.1318 0.0046	4.1416 0.0044	4.0735 0.1173
4.1657 0.2267	4.2074 0.0143	4.2067 0.1101	4.2047 0.1134	4.2185 0.0861
4.2048 0.0077	4.2278 0.0328	4.3089 0.0038	4.3129 0.0038	4.2810 0.0027
4.2604 0.0426	4.2580 0.0284	4.3397 0.0021	4.3485 0.0020	4.2868 0.0061
4.6440 0.0001	4.6805 0.0051	4.6440 0.0058	4.6412 0.0058	4.6603 0.0057
4.6968 0.0040	4.7559 0.0002	4.8221 0.2415	4.8179 0.2160	4.8489 0.2849
4.7721 0.0003	4.8296 0.0001	4.8259 0.1730	4.8215 0.2021	4.8548 0.0907
4.9246 0.1646	4.8885 0.2392	4.9113 0.5182	4.9070 0.5227	4.8809 0.0006
4.9333 0.0165	4.8954 0.0490	4.9417 0.0032	4.9492 0.0027	4.8946 0.0029
5.0256 0.4484	4.9817 0.4806	4.9734 0.0000	4.9880 0.0000	4.9394 0.4997
5.1578 0.0008	5.1988 0.0100	5.1435 0.0192	5.1312 0.0171	5.2031 0.0337

5.1848 0.0009	5.2178 0.0161	5.1851 0.3198	5.1752 0.2937	5.2206 0.0569
5.2190 0.0259	5.3046 0.0006	5.2008 0.0209	5.1968 0.0802	5.2497 0.3087
5.2903 0.0016	5.3201 0.2057	5.2144 0.1157	5.2048 0.0900	5.2580 0.0102
5.3580 0.0221	5.3404 0.1457	5.2936 0.0005	5.2992 0.0005	5.2972 0.0311
5.4045 0.2293	5.3559 0.0091	5.3567 0.0143	5.3566 0.0146	5.3573 0.0126
5.4201 0.0152	5.3661 0.0000	5.4981 0.2127	5.4977 0.2949	5.4334 0.0000
5.4351 0.0408	5.4165 0.0105	5.5126 0.1091	5.5197 0.0345	5.4457 0.0029

Quinoline 4.

Gas-phase	Hexane	2.Propanol	Methanol	Chloroform
4.3193 0.0023	4.3563 0.0030	4.4244 0.0081	4.4287 0.0092	4.3960 0.0046
4.5762 0.0688	4.5571 0.1025	4.5151 0.1857	4.5122 0.1914	4.5336 0.1484
4.5972 0.0367	4.5883 0.0546	4.5687 0.1044	4.5674 0.1084	4.5773 0.0806
5.2949 0.0002	5.3361 0.0006	5.4126 0.0062	5.4175 0.0078	5.3805 0.0019
5.9061 0.6170	5.7916 1.0623	5.5822 1.4089	5.5700 1.4210	5.6651 1.3021
5.9781 0.2482	5.9516 0.1015	5.9117 0.1484	5.9087 0.1555	5.9296 0.1129
6.2504 0.0046	6.2489 0.1908	6.1612 0.2496	6.1559 0.2512	6.1969 0.2329
6.3007 0.1578	6.2807 0.0094	6.3320 0.0156	6.3350 0.0265	6.3105 0.0045
6.4768 0.4160	6.4200 0.3323	6.3550 0.2143	6.3522 0.1987	6.3778 0.2614
6.7226 0.0548	6.6762 0.0371	6.5984 0.0205	6.5936 0.0198	6.6298 0.0261
6.9926 0.0076	6.9711 0.0059	6.9290 0.0035	6.9261 0.0033	6.9470 0.0044
7.0229 0.0236	7.0056 0.0216	6.9728 0.0198	6.9705 0.0197	6.9867 0.0204
7.3175 0.0013	7.2852 0.0014	7.2217 0.0017	7.2176 0.0017	7.2484 0.0016
7.4787 0.0108	7.4422 0.0143	7.3738 0.0222	7.3695 0.0226	7.4022 0.0188
7.5205 0.0019	7.4733 0.0031	7.3833 0.0056	7.3776 0.0060	7.4206 0.0043
7.6098 0.0010	7.5700 0.0013	7.5181 0.0025	7.5153 0.0026	7.5374 0.0019
7.8312 0.0020	7.7995 0.0019	7.7476 0.0037	7.7444 0.0039	7.7685 0.0026
7.9426 0.0110	7.9242 0.0145	7.8868 0.0251	7.8842 0.0262	7.9029 0.0193
7.9574 0.0110	7.9443 0.0121	7.9133 0.0202	7.9110 0.0211	7.9271 0.0156
7.9960 0.0003	8.0641 0.0001	8.0804 0.3558	8.0741 0.3633	8.1199 0.2799

Quinoline 5.

Gas-phase	Hexane	2.Propanol	Methanol	Chloroform
4.2523 0.0014	4.2873 0.0017	4.3503 0.0028	4.3543 0.0029	4.3244 0.0022
4.4968 0.0632	4.4823 0.0866	4.4485 0.1451	4.4459 0.1498	4.4638 0.1178
4.5395 0.0475	4.5319 0.0742	4.5117 0.1495	4.5102 0.1556	4.5211 0.1136
5.0186 0.0025	4.9575 0.0029	4.8609 0.0032	4.8554 0.0032	4.8985 0.0031
5.1807 0.0000	5.1652 0.0005	5.0579 0.0005	5.0518 0.0006	5.0998 0.0005
5.2322 0.0014	5.2241 0.0000	5.3030 0.0002	5.3080 0.0002	5.2703 0.0001
5.2389 0.0041	5.3041 0.0132	5.3884 0.4623	5.3882 0.5901	5.3640 0.0693
5.3090 0.0393	5.3706 0.0957	5.4280 0.2972	5.4304 0.2457	5.4148 0.2759
5.5515 0.0043	5.5511 0.0064	5.5468 0.0565	5.5464 0.0593	5.5493 0.0238
5.6297 0.0140	5.6836 0.0698	5.6162 0.6665	5.6139 0.6089	5.6502 0.9154
5.6526 0.0400	5.6973 0.2657	5.7503 0.1350	5.7523 0.1449	5.7307 0.0828
5.7825 0.0615	5.7863 0.6462	5.8265 0.0456	5.8315 0.0412	5.7944 0.1079
5.8653 0.0003	5.8996 0.0484	5.9426 0.0562	5.9429 0.0563	5.9397 0.0536
5.8828 0.3946	5.9431 0.1435	5.9649 0.0205	5.9600 0.0242	5.9936 0.0252
5.9683 0.4375	5.9670 0.0006	6.0511 0.0021	6.0492 0.0016	5.9999 0.0130

6.1153 0.0108	6.0565 0.0117	6.0603 0.0451	6.0655 0.0765	6.0682 0.0004
6.1816 0.0973	6.1362 0.0896	6.0886 0.4600	6.0863 0.4264	6.0890 0.0409
6.2104 0.2373	6.1617 0.3238	6.1341 0.0008	6.1438 0.0007	6.1142 0.4397
6.2561 0.0018	6.2856 0.0014	6.3102 0.0063	6.3077 0.0062	6.3182 0.0016
6.4005 0.0121	6.3607 0.0103	6.3414 0.0015	6.3447 0.0016	6.3286 0.0074

Quinoline 6.

Gas-phase	Hexane	2.Propanol	Methanol	Chloroform
4.0882 0.0001	4.1339 0.0001	4.2042 0.0030	4.2081 0.0048	4.1767 0.0003
4.2652 0.0852	4.2696 0.1240	4.2533 0.2161	4.2514 0.2222	4.2633 0.1737
4.3247 0.0061	4.3550 0.0064	4.3433 0.0262	4.3366 0.0239	4.3847 0.0100
4.3850 0.0025	4.4247 0.0092	4.4130 0.0161	4.4149 0.0186	4.3927 0.0356
4.5408 0.0392	4.4927 0.0415	4.4550 0.0049	4.4479 0.0040	4.4998 0.0121
4.5729 0.0431	4.5579 0.0531	4.5205 0.0892	4.5202 0.0985	4.5271 0.0236
4.7334 0.0016	4.6247 0.0048	4.5636 0.0320	4.5667 0.0273	4.5533 0.0639
4.8798 0.0002	4.8976 0.0038	4.7751 0.0017	4.7672 0.0017	4.8335 0.0020
4.9192 0.0057	4.9305 0.0047	4.8823 0.0046	4.8818 0.0046	4.8878 0.0048
5.0419 0.0020	4.9373 0.0005	4.9969 0.0067	4.9996 0.0076	4.9742 0.0037
5.0622 0.0096	5.1297 0.0099	5.0421 0.0134	5.0342 0.0130	5.0980 0.0042
5.2163 0.0018	5.1680 0.0128	5.0737 0.0010	5.0707 0.0012	5.1026 0.0102
5.2565 0.0022	5.2051 0.0133	5.2134 0.1472	5.2109 0.1530	5.2108 0.0805
5.3162 0.0097	5.2937 0.0072	5.2959 0.0493	5.2945 0.0595	5.2956 0.0515
5.3666 0.0670	5.3275 0.0770	5.3203 0.0181	5.3189 0.0422	5.3373 0.0009
5.4584 0.0196	5.3945 0.0070	5.3704 0.1097	5.3699 0.0536	5.3468 0.0305
5.4723 0.0462	5.4853 0.0261	5.3747 0.3280	5.3724 0.5710	5.4116 0.0680
5.4978 0.0019	5.5198 0.0022	5.4155 1.0211	5.4091 0.8245	5.4782 1.2471
5.5233 0.0012	5.5535 0.7215	5.4396 0.0145	5.4321 0.0044	5.5020 0.0468
5.5632 0.0011	5.5992 0.0081	5.5151 0.0037	5.5149 0.0040	5.5170 0.0025

Quinoline 7.

Gas-phase	Hexane	2.Propanol	Methanol	Chloroform
3.8208 0.0016	3.8395 0.0025	3.8628 0.0061	3.8638 0.0065	3.8549 0.0041
4.1627 0.0501	4.1550 0.0810	4.1118 0.1690	4.1075 0.1759	4.1350 0.1282
4.1779 0.0005	4.1696 0.0017	4.1534 0.0026	4.1523 0.0028	4.1603 0.0016
4.3951 0.0140	4.3935 0.0187	4.4035 0.0404	4.4046 0.0429	4.3977 0.0280
4.4464 0.0477	4.4455 0.0563	4.4558 0.0660	4.4569 0.0664	4.4499 0.0627
4.4842 0.0283	4.4830 0.0379	4.4841 0.0595	4.4844 0.0610	4.4829 0.0502
4.7103 0.0047	4.7286 0.0059	4.7599 0.0070	4.7615 0.0070	4.7481 0.0068
4.8996 0.0185	4.8950 0.0156	4.8421 0.0445	4.8391 0.0467	4.8628 0.0315
4.9302 0.0200	4.9199 0.0934	4.8788 0.3756	4.8740 0.3906	4.9053 0.2693
4.9882 0.1412	4.9791 0.1933	4.9795 0.1042	4.9798 0.1050	4.9761 0.1221
5.0762 0.0270	5.0656 0.0167	5.0424 0.1456	5.0395 0.1559	5.0565 0.0783
5.1921 0.0368	5.1667 0.0470	5.1275 0.1083	5.1244 0.1166	5.1449 0.0690
5.2628 0.0355	5.2671 0.1190	5.2139 0.1477	5.2101 0.1465	5.2385 0.1498
5.3143 0.0297	5.2958 0.0378	5.2361 0.0804	5.2317 0.0797	5.2631 0.0689
5.3291 0.0209	5.3009 0.0064	5.2841 0.0837	5.2805 0.0759	5.3030 0.0927
5.4077 0.1178	5.3563 0.1270	5.3093 0.0989	5.3093 0.1057	5.3122 0.0634
5.4802 0.3427	5.4389 0.4041	5.3236 0.0062	5.3172 0.0133	5.3731 0.0230

5.5481 0.0090	5.4623 0.0713	5.3829 0.4105	5.3787 0.3682	5.4073 0.4873
5.5777 0.2016	5.5523 0.0385	5.4151 0.0902	5.4077 0.1287	5.4696 0.0092
5.6440 0.0015	5.5819 0.2340	5.5402 0.4183	5.5363 0.4222	5.5621 0.3724

Quinoline 8.

Gas-phase	Hexane	2.Propanol	Methanol	Chloroform
3.8411 0.0007	3.8895 0.0008	3.9781 0.0010	3.9840 0.0011	3.9407 0.0009
4.0162 0.0022	4.0753 0.0035	4.1909 0.0095	4.1987 0.0103	4.1416 0.0061
4.2236 0.0015	4.2597 0.0019	4.3256 0.0036	4.3298 0.0038	4.2982 0.0027
4.3091 0.0027	4.3731 0.0072	4.4579 0.1479	4.4553 0.1535	4.4407 0.0291
4.4511 0.0006	4.4965 0.0993	4.4795 0.1016	4.4830 0.1153	4.4758 0.1306
4.5146 0.0775	4.5418 0.0646	4.5562 0.0842	4.5605 0.0743	4.5438 0.1165
4.5539 0.0712	4.5551 0.0365	4.7406 0.0021	4.7533 0.0021	4.6600 0.0020
4.9380 0.0175	4.8998 0.0242	4.8286 0.0417	4.8239 0.0432	4.8587 0.0333
5.1075 0.0205	5.0859 0.0293	5.0391 0.0593	5.0359 0.0626	5.0594 0.0434
5.2010 0.0006	5.2353 0.0062	5.1764 0.1525	5.1708 0.2089	5.2030 0.0229
5.2614 0.0001	5.2397 0.0006	5.1963 0.2552	5.1897 0.2009	5.2482 0.3627
5.2667 0.0027	5.3274 0.3299	5.3123 0.0019	5.3169 0.0022	5.2819 0.0009
5.4041 0.2746	5.3689 0.0007	5.3546 0.0034	5.3439 0.0035	5.4229 0.0037
5.4923 0.0020	5.4687 0.0014	5.3990 0.0064	5.3879 0.0064	5.4454 0.0021
5.5970 0.0049	5.5209 0.0021	5.4265 0.0122	5.4233 0.0165	5.4689 0.0056
5.6109 0.0017	5.5641 0.0045	5.4582 0.0076	5.4456 0.0080	5.4834 0.0009
5.6365 0.0007	5.6474 0.0035	5.5160 1.0649	5.5050 1.1073	5.5380 0.0056
5.6514 0.0030	5.6555 0.0055	5.5658 0.0032	5.5687 0.5221	5.5885 0.7571
5.7033 0.0008	5.6880 0.3676	5.5804 0.5865	5.5793 0.0289	5.6549 0.8351
5.7487 0.0020	5.7427 0.0202	5.7384 0.0024	5.7392 0.0024	5.7148 0.0025

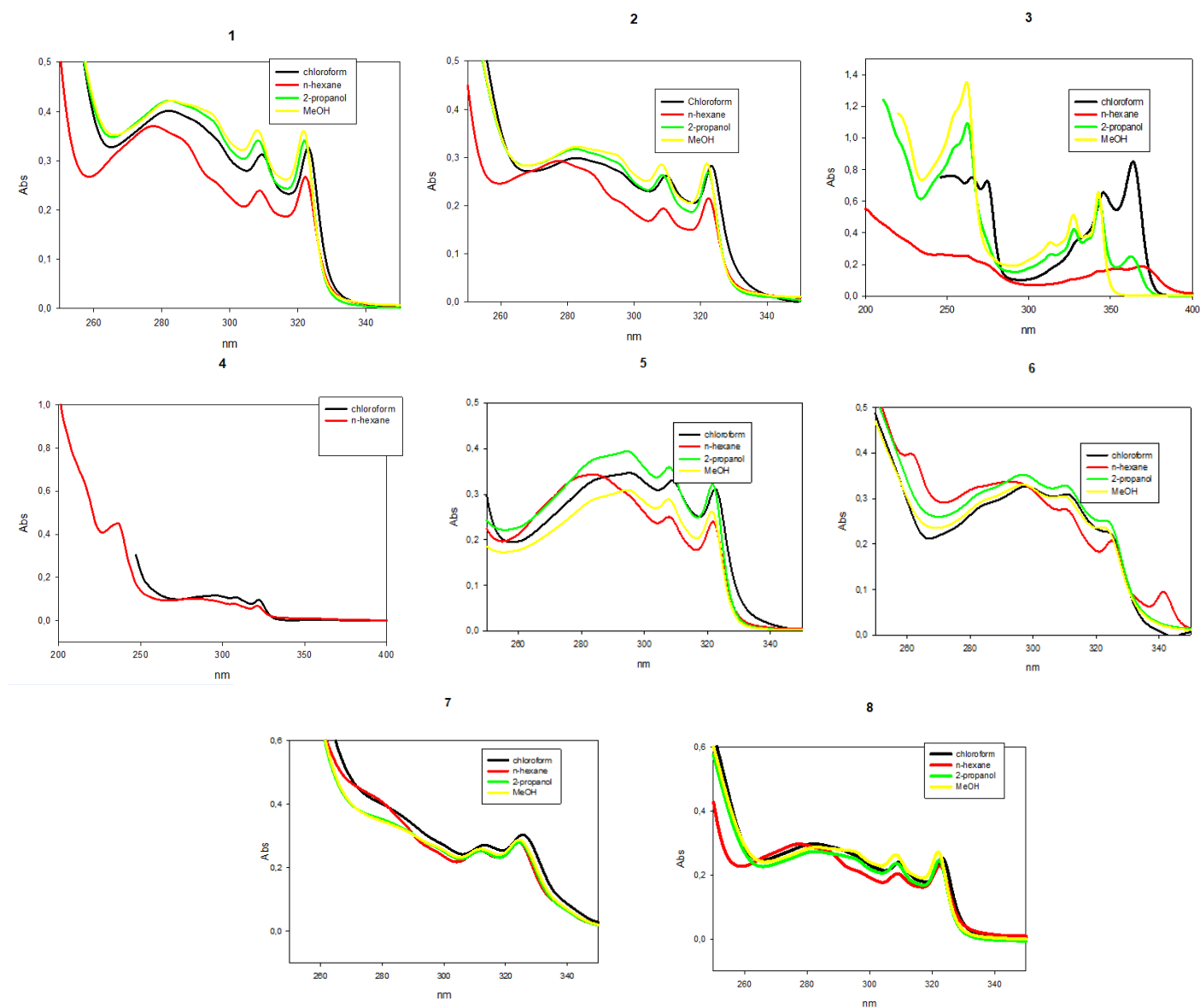


Figure S3. UV spectra of **1-8** at concentration $4 \cdot 10^{-5}$ M.

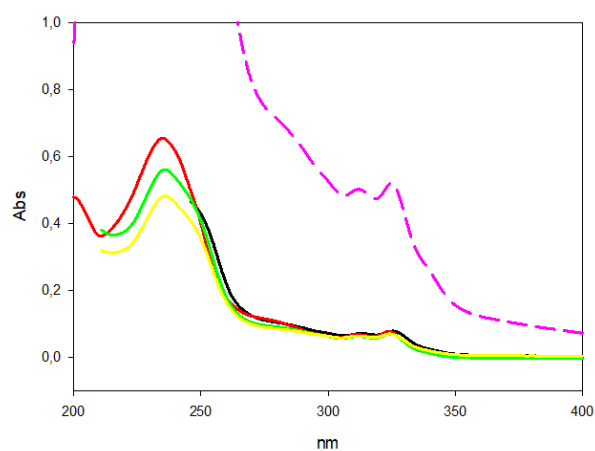


Figure S4. UV spectra of quinoline **7** in *n*-hexane (red line) chloroform (black line), methanol (yellow line) and 2-propanol (green line) and embedded in DMPC liposomes (dotted pink line).

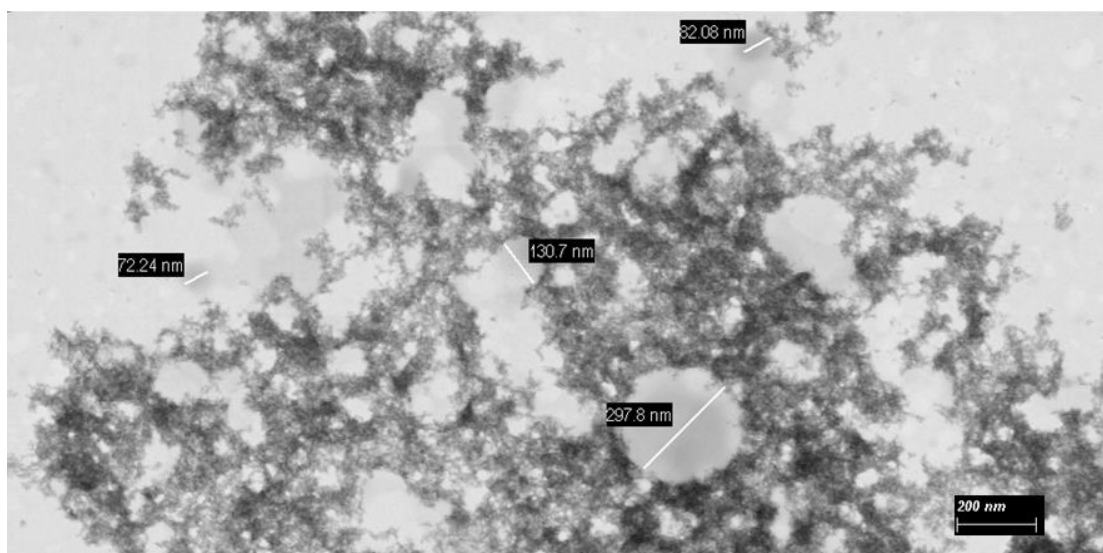
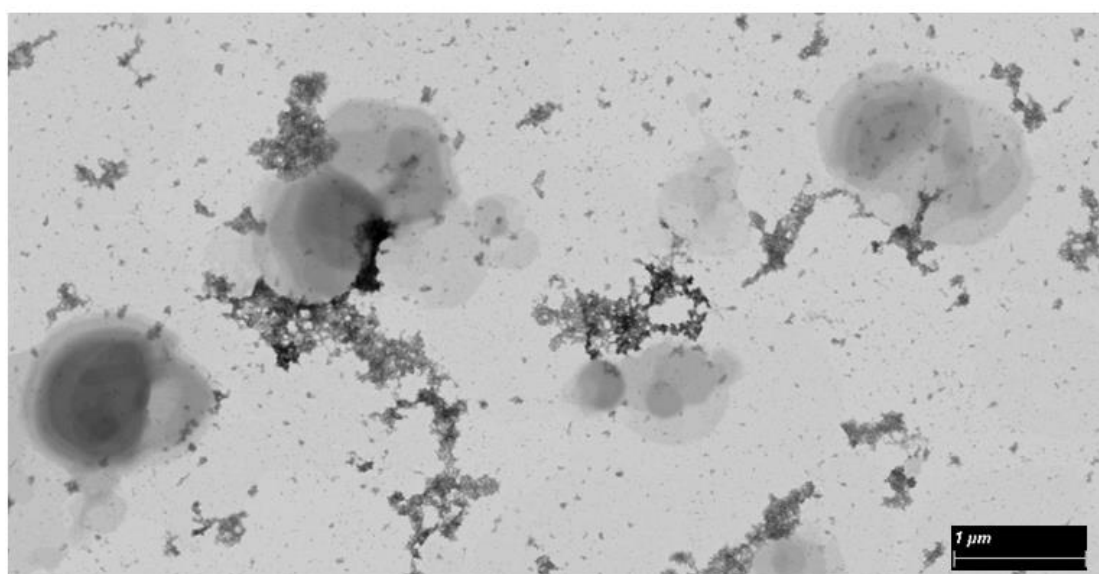


Figure S5. Images of 1 mM DMPC/2 sonicated liposomes solution obtained using a Scanning Electron Microscope (ZEISS GeminiSEM 500).

Table S3. Diameters and widths of the main peaks and approximate position of the peaks at larger sizes (when present) with the corresponding intensity weight in percent, inferred from the D_H intensity weighted distributions.

Formulation	D_H (nm) soon after preparation	D_H (nm) after one week	D_H (nm) after two weeks
DMPC+1	136 ± 25 ; ≈ 700 (35%)	130 ± 40	110 ± 39
DPPC+1	80 ± 33 ; ≈ 850 (45%)	80 ± 29 ; ≈ 800 (20%)	95 ± 28 ; ≈ 600 (10%)
DOPC+1	160 ± 23 ; ≈ 750 (15%)	124 ± 28 ; ≈ 700 (10%)	110 ± 42
DMPC+2	120 ± 36 ; ≈ 450 (30%)	150 ± 36	179 ± 30
DPPC+2	80 ± 39 ; ≈ 850 (45%)	95 ± 45 ; ≈ 750 (10%)	80 ± 40 ; ≈ 750 (10%)
DOPC+2	135 ± 40 ; ≈ 800 (25%)	127 ± 43 ; ≈ 600 (10%)	125 ± 24
DMPC+3	160 ± 26 ; ≈ 850 (40%)	109 ± 48 ; ≈ 450 (20%)	103 ± 39
DPPC+3	75 ± 35 ; ≈ 850 (50%)	80 ± 29 ; ≈ 310 (30%)	130 ± 37
DOPC+3	100 ± 37 ; ≈ 350 (40%)	110 ± 43 ; ≈ 310 (10%)	135 ± 42
DMPC+4	140 ± 38 ; ≈ 350 (15%)	130 ± 31	130 ± 25
DPPC+4	135 ± 27 ; ≈ 400 (10%)	120 ± 38	120 ± 30
DOPC+4	115 ± 24 ; ≈ 400 (5%)	115 ± 47	110 ± 37
DMPC+5	142 ± 21 ; ≈ 650 (5%)	153 ± 25 ; ≈ 550 (5%)	165 ± 31
DPPC+5	92 ± 35 ; ≈ 600 (20%)	120 ± 27 ; ≈ 600 (15%)	70 ± 43 ; ≈ 500 (5%)
DOPC+5	115 ± 31 ; ≈ 650 (15%)	105 ± 38 ; ≈ 500 (5%)	125 ± 36
DMPC+6	126 ± 40 ; ≈ 650 (35%)	135 ± 41 ; ≈ 450 (20%)	150 ± 37
DPPC+6	132 ± 37 ; ≈ 750 (45%)	140 ± 44 ; ≈ 550 (35%)	138 ± 44 ; ≈ 500 (5%)
DOPC+6	95 ± 22 ; ≈ 450 (45%)	139 ± 33 ; ≈ 450 (25%)	145 ± 33
DMPC+7	136 ± 39	138 ± 28	140 ± 36
DPPC+7	140 ± 21	150 ± 36	148 ± 41
DOPC+7	116 ± 31	120 ± 44	123 ± 45
DMPC+8	150 ± 38	152 ± 40	155 ± 38
DPPC+8	140 ± 30	132 ± 43	148 ± 39
DOPC+8	120 ± 37	122 ± 34	118 ± 29