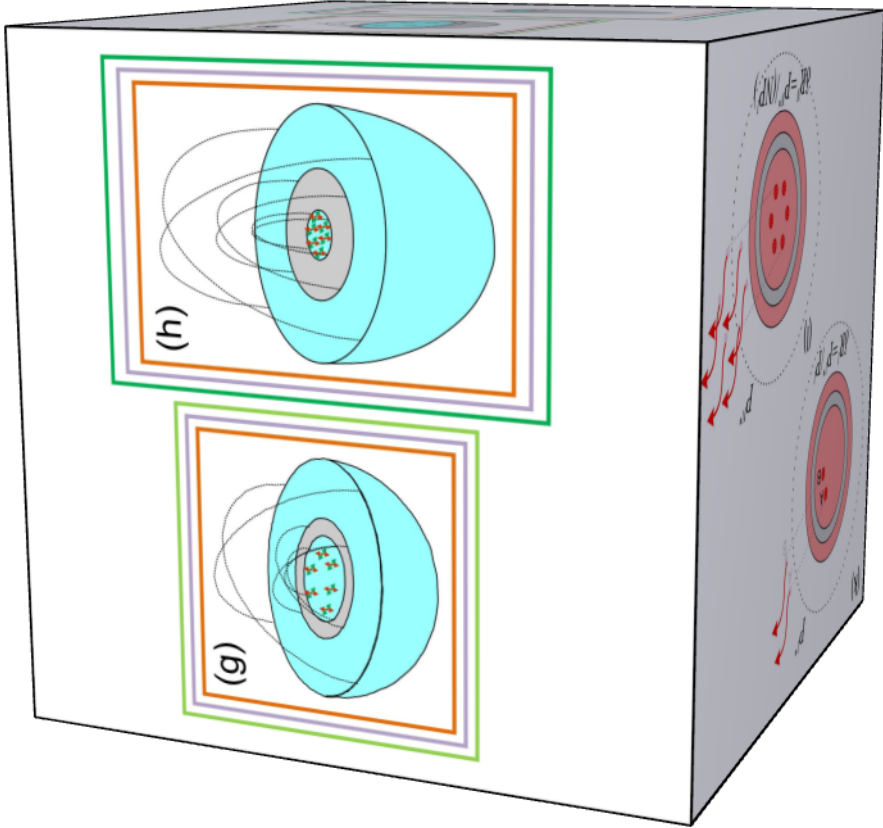
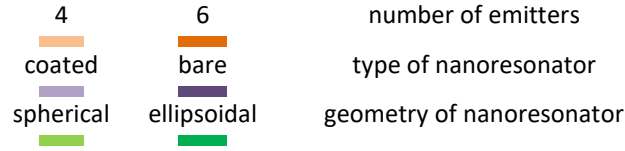




Visualization 3. Optical response at the excitation and emission, P_x factor and $P_x cQE$ of the optimized nanoresonators. (a) QE quantum efficiency, (b) Purcell factor, (c) δR radiative rate enhancement, (d) P_x factor and $P_x cQE$, (e) accumulated surface charge and (f) maximal extension of the far-field lobe. Lines are to guide eyes and to uncover tendencies of depicted quantities in groups of (a, b, c, d, e, f) spherical and ellipsoidal nanoresonators, among them (a, b, c, e, f) excitation and emission phenomena separately, (d) P_x factor and $P_x cQE$ quantities separately.

Colors indicate, when certain quantity is larger in case of



optical response	bare_4		coated_4		bare_6		coated_6	
	spherical	ellipsoidal	spherical	ellipsoidal	spherical	ellipsoidal	spherical	ellipsoidal
QE_{ex} (%)	66.26	12.46	42.69	63.47	65.03	12.49	32.69	62.00
$Purcell_{ex}$	6.35	9081.21	19.35	660.97	9.69	13540.95	38.03	934.18
δR_{ex} (a.u.)	4.21	1131.16	8.26	419.54	6.30	1690.79	11.43	584.75
charge _{ex} (C)	2.29×10^{-16}	4.55×10^{-14}	3.63×10^{-15}	1.06×10^{-14}	4.83×10^{-16}	6.81×10^{-14}	7.48×10^{-15}	1.47×10^{-14}
far-field _{ex} lobe max. (W/m ²)	88.53	1.26×10^4	176.41	4450.85	199.17	2.84×10^4	398.52	9302.28
QE_{em} (%)	44.19	82.92	39.57	79.03	44.15	82.32	39.91	78.71
$Purcell_{em}$	5241.30	843.46	11208.90	630.55	7871.13	1262.17	16386.02	1039.51
δR_{em} (a.u.)	2316.12	691.99	4435.56	498.30	3474.79	1046.40	6539.87	825.30
charge _{em} (C)	4.55×10^{-14}	1.69×10^{-14}	1.57×10^{-13}	2.72×10^{-14}	6.82×10^{-14}	2.53×10^{-14}	2.32×10^{-13}	4.33×10^{-14}
far-field _{em} lobe max. (W/m ²)	1.34×10^4	2042.65	2.57×10^4	1466.71	3.01×10^4	4596.89	5.69×10^4	3589.64
P_x factor	9.75×10^3	7.83×10^5	3.66×10^4	2.09×10^5	2.20×10^4	1.76×10^6	8.13×10^4	4.78×10^5
$P_x cQE$	4.31×10^3	6.42×10^5	1.45×10^4	1.65×10^5	9.67×10^3	1.45×10^6	3.25×10^4	3.77×10^5

Table corresponding to Visualization 3. Optical response at the excitation and emission wavelength, P_x factor and $P_x cQE$ of the optimized nanoresonators. QE : quantum efficiency, $Purcell$: Purcell factor, δR : radiative rate enhancement, charge: accumulated surface charge, far-field lobe max.: maximal extension of the far-field lobe, P_x factor: total fluorescence enhancement, $P_x cQE$: objective function. Lower index "ex" and "em" refers to excitation and emission phenomena, respectively.