Table 2-ESI. Γ_{XS} representation products corresponding to electric dipole allowed transitions in D_{2h} symmetry.[a,b]

⊗	a_g	b_{1g}	b_{2g}	b_{3g}	a_u	b_{1u}	b_{2u}	b_{3u}
a_g						b_{1u}	b_{2u}	b_{3u}
b_{1g}					b_{1u}		b_{3u}	b_{2u}
b_{2g}					b_{2u}	b_{3u}		b_{1u}
b_{3g}					b_{3u}	b_{2u}	b_{1u}	
a_u		b_{1u}	b_{2u}	b_{3u}				
b_{1u}	b_{1u}		b_{3u}	b_{2u}				
b_{2u}	b_{2u}	b_{3u}		b_{1u}				
b_{3u}	b_{3u}	b_{2u}	b_{1u}					

[a]$\Gamma_{XS} = b_{1u}$ implies 1s ➐ π^* transitions involving *pcm*-based $\pi_\perp^*$ MOs. [b]$\Gamma_{XS} = b_{2u}$ or b_{3u} implies 1s ➐ π^* transitions involving Ph- and F-based $\pi_\parallel^*$.