**Supporting Information**

***LED visible light assisted photo-oxidation of acetaminophen using one-step synthesis of Cu,Fe@g-C3N4 nanosheet – activated persulfate system in aqueous solutions***

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**Table.S1. The physico-chemical characteristics of acetaminophen (APAP)** (1)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Molecular Formula | Chemical structure | Mw (g/mol) | Therapeutic  group | Solubility (at 25 ˚C (mg/L) | Density (g/cm³) |
| C8H9NO2 |  | 151.163 | Analgesic | 14000 | 1.26 |

*Cl− + HO• → Cl* **(14)**

*ClOH• − + H− → Cl• + H2O*  **(15)**

*Cl• + Cl• → Cl2• −* **(16)**

*Cl2• − + Cl2• − → Cl2 + 2 Cl−*  **(17)**

*Cl• + Cl• → Cl2* **(18)**

*Cl2 + H2O → HOCl + HCl* **(19)**

*HOCl → H+ + HClO•*  **(20)**

*Cl• +* *MCS (h ab+ ) → Cl2 or* *Cl•* **(21)**

*CO32− +* *HO•* → CO3• − *+OH−* **(22)**

*2CO3• − +H2O → 2CO2 + HO2• + OH•* **(23)**

*NO3−+ HO•→ NO3• + OH−* **(24)**

*PO43- + HO• → PO4•2- + OH−*  **(25)**