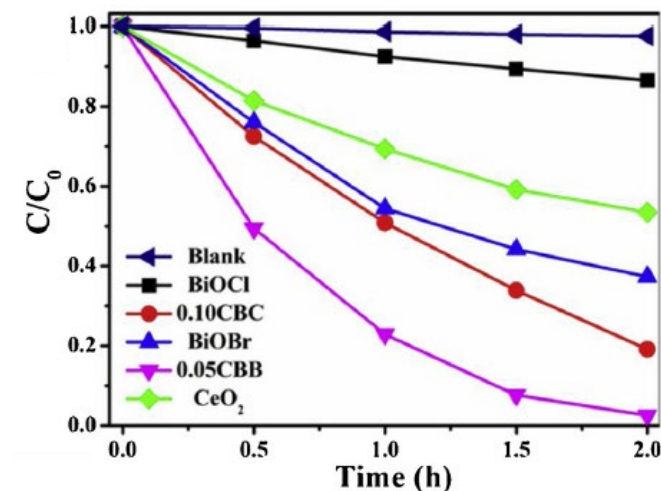
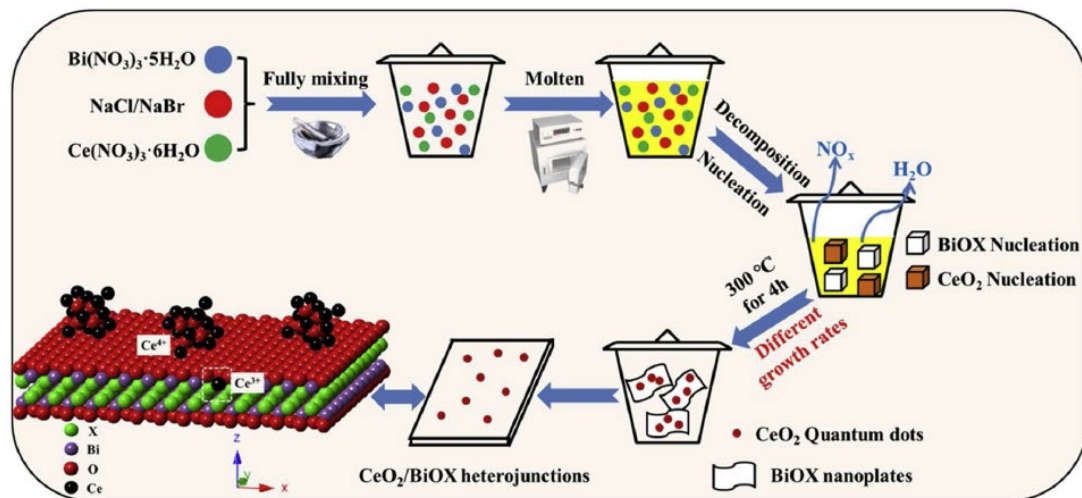


# 高い光酸化還元能力を示す0D CeO<sub>2</sub>量子ドット/ 2D BiOX (X=Cl,Br) ナノプレートヘテロ接合のOne-step低温合成

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## One-step low-temperature synthesis of 0D CeO<sub>2</sub> quantum dots/2D BiOX (X = Cl, Br) nanoplates heterojunctions for highly boosting photo-oxidation and reduction ability

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簡易なOne-step低温合成を用い、CeO<sub>2</sub> QD/BiOX (X=Cl,Br) ヘテロ接合の形成を行った、CeO<sub>2</sub>量子ドットの導入はバンドギャップを狭くし可視光吸収を高めることができた。5W白色LED光照射下でのテトラサイクリン(TC)の分解とCr<sup>6+</sup>の還元に関して、CeO<sub>2</sub> QDs/BiOX (X=Cl,Br) ヘテロ接合光触媒は裸のCeO<sub>2</sub>、BiOClとBiOBrよりはるかに高い光触媒性能を示した。A simple one-step low-temperature procedure was carried out for the synthesis of CeO<sub>2</sub> QDs/BiOX (X=Cl, Br) heterojunctions. The introduction of CeO<sub>2</sub> QDs could narrow the band gap and boost visible light absorption. The CeO<sub>2</sub> QDs/BiOX (X=Cl, Br) heterojunction photocatalysts exhibited much higher photocatalytic performance than those of bare CeO<sub>2</sub>, BiOCl and BiOBr on the degradation of tetracycline (TC) and reduction of Cr<sup>6+</sup> under 5W white LED light irradiation.