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## List of Abbreviations

ATR Auto-thermal Reforming

Bcm Billion cubic meters

BG Biomass Gasification

Bi Bismuth

BiVO<sub>4</sub> Bismuth Vanadate

BOD Biochemical Oxygen Demand

btoe billion tonnes of oil equivalent

CASTEP Cambridge Serial Total Energy Package

CB Conduction Band

CBM Conduction Band Minimum

CCD Charge Coupled Device

CG Coal Gasification

COD Chemical Oxygen Demand

CPOX Catalytic Partial Oxidation

DFT Density Functional Theory

DI De-ionised

DOE Department of Energy

DOS Density of States

EDAX Energy Dispersive spectroscopy