Spin-orbit calculations on the ground and excited electronic states of CdBr molecule

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Highlights

- The low-lying states of CdBr are calculated with high-level MRCI+Q method.
- The spin-orbit coupling effect is included in the calculation.
- Spectroscopic constants of Λ-S and Ω states of CdBr are determined.
- The predissociation of $C^2\Pi$($v' \geq 1$)$\rightarrow B^2\Sigma^+$ are discussed.
- Radiative lifetimes of $C^2\Pi$ and $B^2\Sigma^+$ states of CdBr are evaluated.