Fluorine in R Coronae Borealis Stars

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Neutral fluorine (F I) lines are identified in the optical spectra of several R Coronae Borealis stars (RCBs) at maximum light. These lines provide the first measurement of the fluorine abundance in these stars. Fluorine is highly enriched in the atmospheres of some RCBs. The overabundance of fluorine in RCBs is evidence for the synthesis of fluorine. These results are discussed in the light of the scenario that RCBs are formed by accretion of an He white dwarf by a C-O white dwarf. Sakurai's object (V4334 Sgr), a final He-shell flash product, shows no detectable F I lines.