Supporting Information

Dalton Transaction

Optical contrast and cycling of bistable luminescence properties in $Rb_2KIn_{(1-x)}Ce_xF_6$ compounds

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Figure S1. a) and b) Pictures of the crucible and the as-grown crystals after the crystal growth attempts for the 2 mol% and the 10 mol% targeted cerium content batch. c) and d) Pictures of LC and HC single crystals, respectively.

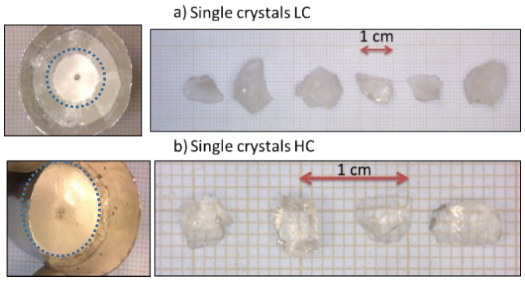


Figure S2. M(H/T) corrected from diamagnetism from the sample holder and from Rb_2KInF_6 host collected at 100 K. The dots indicate the data and the lines correspond to the fit of the data.
a) Low concentrated cerium-doped Rb_2KInF_6 crystals ([Ce]<<1% molar, LC crystal), b) 4.6% molar cerium-doped Rb_2KInF_6 crystals (HC crystal).

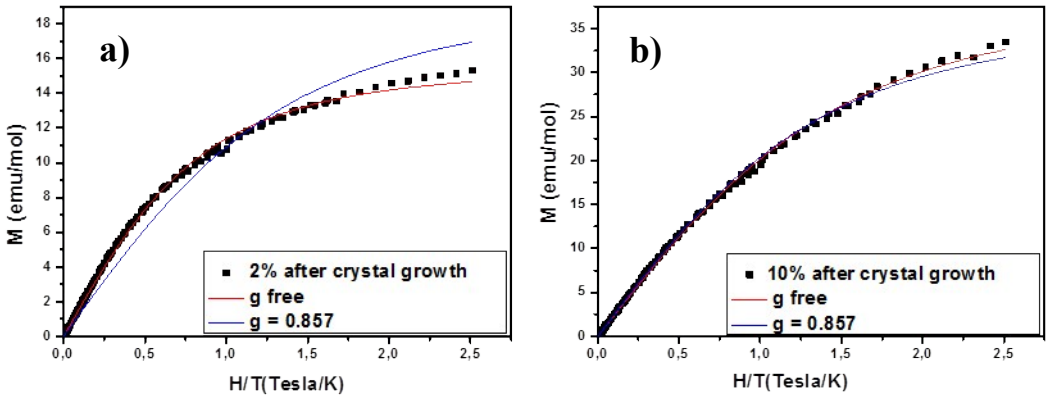
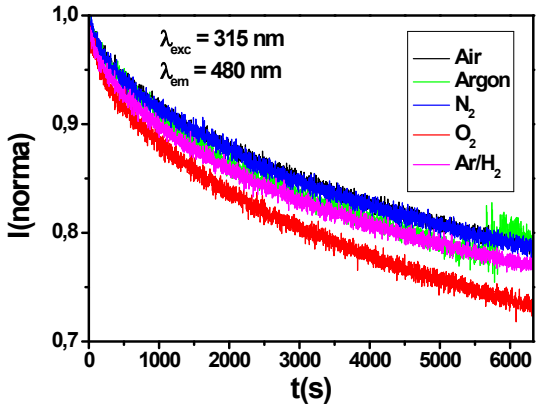


Figure S3. Kinetic of 4.6% cerium content Rb_2KInF_6 crushed crystal (HC) emission in various gas atmosphere for a) first step at λ_{exc} = 315 nm and λ_{em} = 480 nm (Ce^{3+} emission), and b) second step at λ_{exc} = 255 nm and λ_{em} = 630 nm (In^{+} emission).

a)



b)

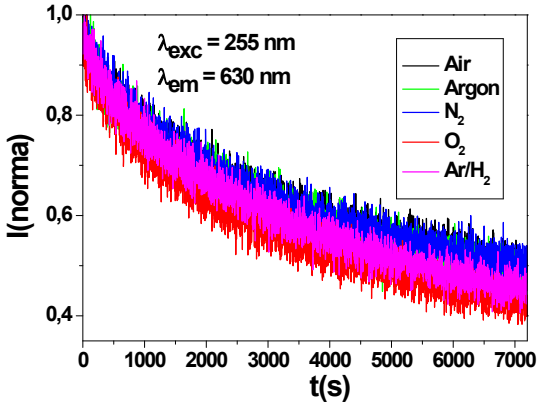


Figure S4. Irradiation Kinetic for a) <1% cerium content Rb_2KInF_6 crushed crystal (LC) under λ_{exc} = 255 nm and λ_{em} = 630 nm, and b) 4.6% cerium content Rb_2KInF_6 crushed crystal (HC) under λ_{exc} = 255 nm and λ_{em} = 650 nm.