Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

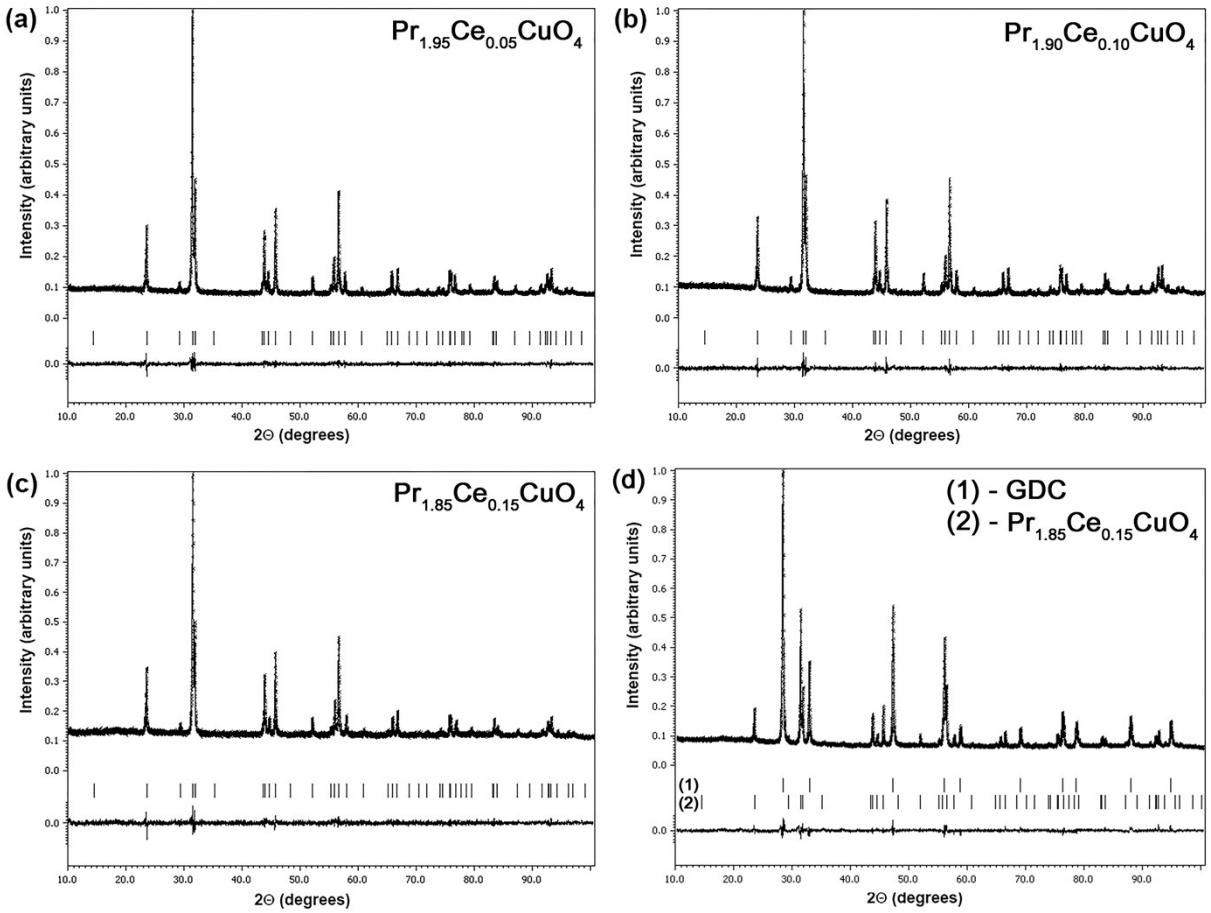

Fig. SI1 XRPD patterns of the $Pr_{2-x}Ce_xCuO_{4\pm\delta}$ (x = 0.05; 0.1; 0.15) (a-c) and $Pr_{1.85}Ce_{0.15}CuO_4$/GDC mixture (d) annealed at 950 ^oC for 25 h in air.

Table SI1

Unit cell parameters of the $Pr_{2-x}Ce_xCuO_4$ (space group *I4/mmm*)

$Pr_{2-x}Ce_xCuO_4$, *x*	**Unit cell parameters**		
	a, Å	***c,*** Å	**V,** Å^3
0	3.9635(2)	12.2104(5)	191.8(1)
0.05	3.9634(1)	12.2207(4)	192.0(1)
0.10	3.9637(1)	12.1851(5)	191.4(1)
0.15	3.9644(1)	12.1581(6)	191.1(1)

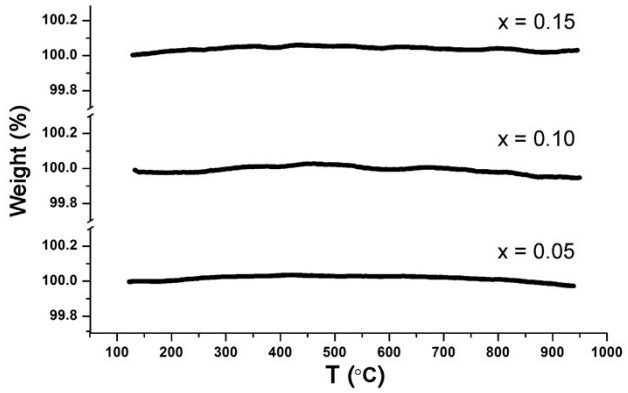

Fig. SI2 Temperature dependencies of a weight change of the $Pr_{2-x}Ce_xCuO_{4\pm\delta}$ (x = 0.05; 0.1; 0.15) upon heating in air.

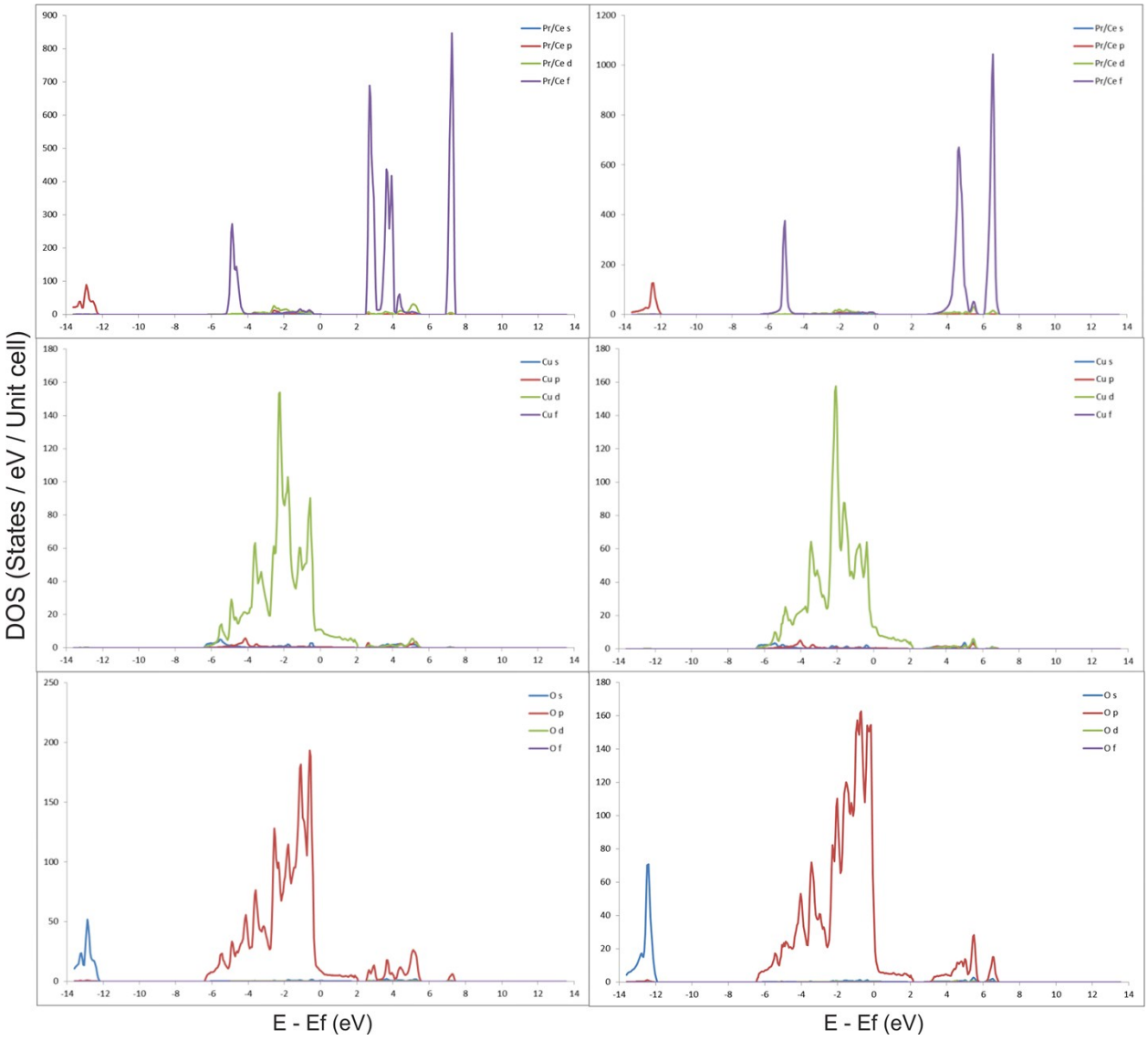

Fig.SI3 Partial DOS (*l*-resolved) for Pr/Ce, Cu, and O atoms in the 2.5%- (left column) and 10%-Ce (right column) doped Pr_2CuO_4. Fermi energy is at zero.