

ADVANCED MATERIALS

Supporting Information

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Observing and Modeling the Sequential Pairwise
Reactions that Drive Solid-State Ceramic Synthesis

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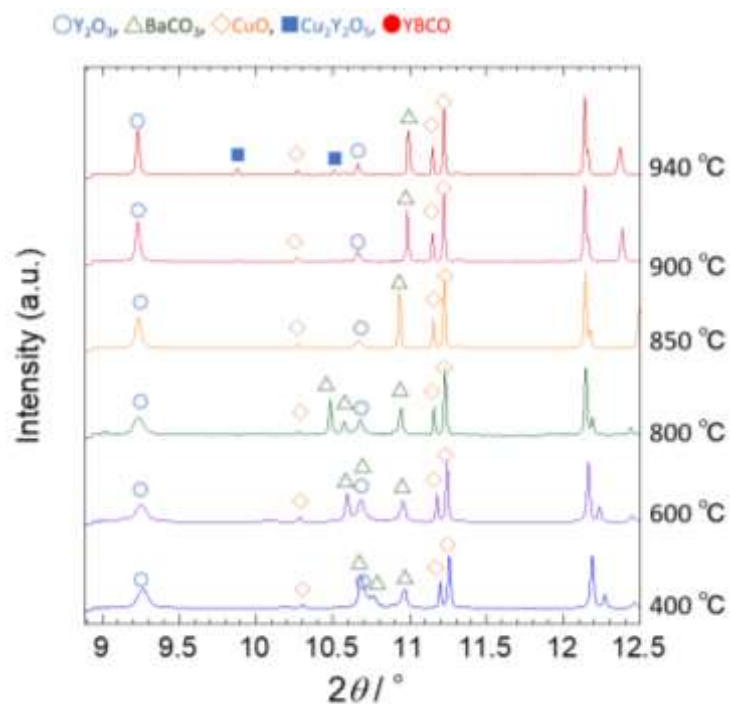


Figure S1. XRD patterns of the Y₂O₃-BaCO₃-CuO mixture at 400, 600, 800, 850, 900, 940 °C upon heating. The sample was heated in air at a rate of 30 °C /min. $\lambda = 0.496197 \text{ \AA}$.

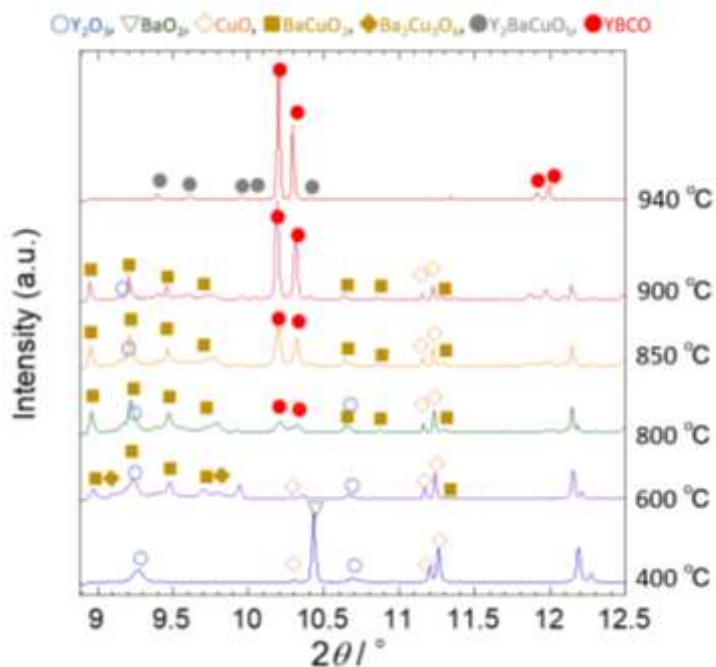


Figure S2. XRD patterns of the Y₂O₃-BaO₂-CuO mixture at 400, 600, 800, 850, 900, 940 °C upon heating. The sample was heated in air at a rate of 30 °C /min. $\lambda = 0.496197 \text{ \AA}$.

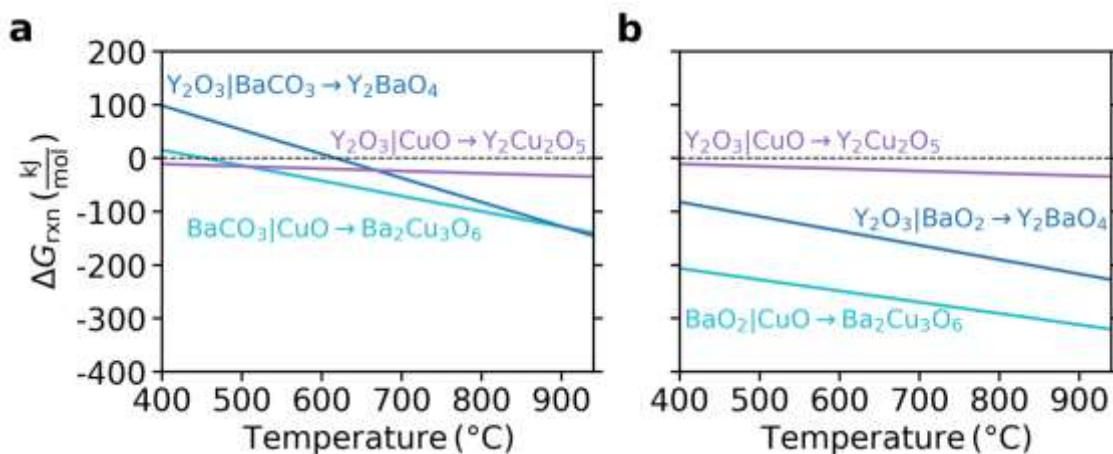


Figure S3. Pairwise interfacial reaction energies in a vacuum atmosphere. **a)** For synthesis from Y_2O_3 , BaCO_3 , and CuO . **b)** For synthesis from Y_2O_3 , BaO_2 , and CuO . The partial pressures of O_2 and CO_2 are now taken to be 1 ppm. Reactions are normalized per 12 moles of any atoms. This change in normalization arises because the system is no longer able to exchange oxygen freely with the atmosphere. The driving force to form $\text{Ba}_2\text{Cu}_3\text{O}_6$ at the $\text{BaO}_2|\text{CuO}$ interface is still much larger than any other interface (as shown previously in **Figure 2d** for synthesis in air).

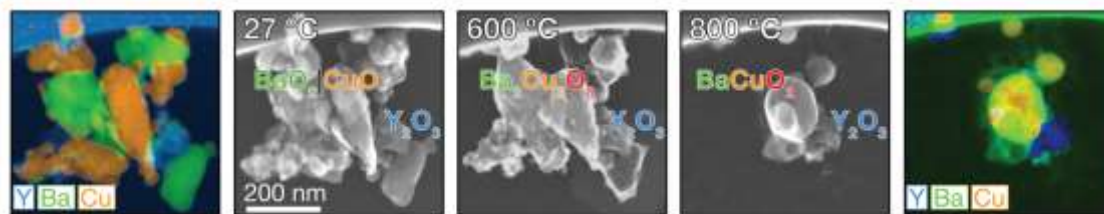


Figure S4. *In situ* SEM and EDX for the reaction of $0.5 \text{Y}_2\text{O}_3 + 2 \text{BaO}_2 + 3 \text{CuO}$, heated from 27°C to 800°C at $30^{\circ}\text{C}/\text{min}$. The EDX map on the far left was taken before heating and the one on the far right taken after cooling down from 800°C to room temperature. This provides further confirmation that the only reactive interface among the initial precursors is $\text{BaO}_2|\text{CuO}$ with Y_2O_3 remaining inert throughout this experiment.

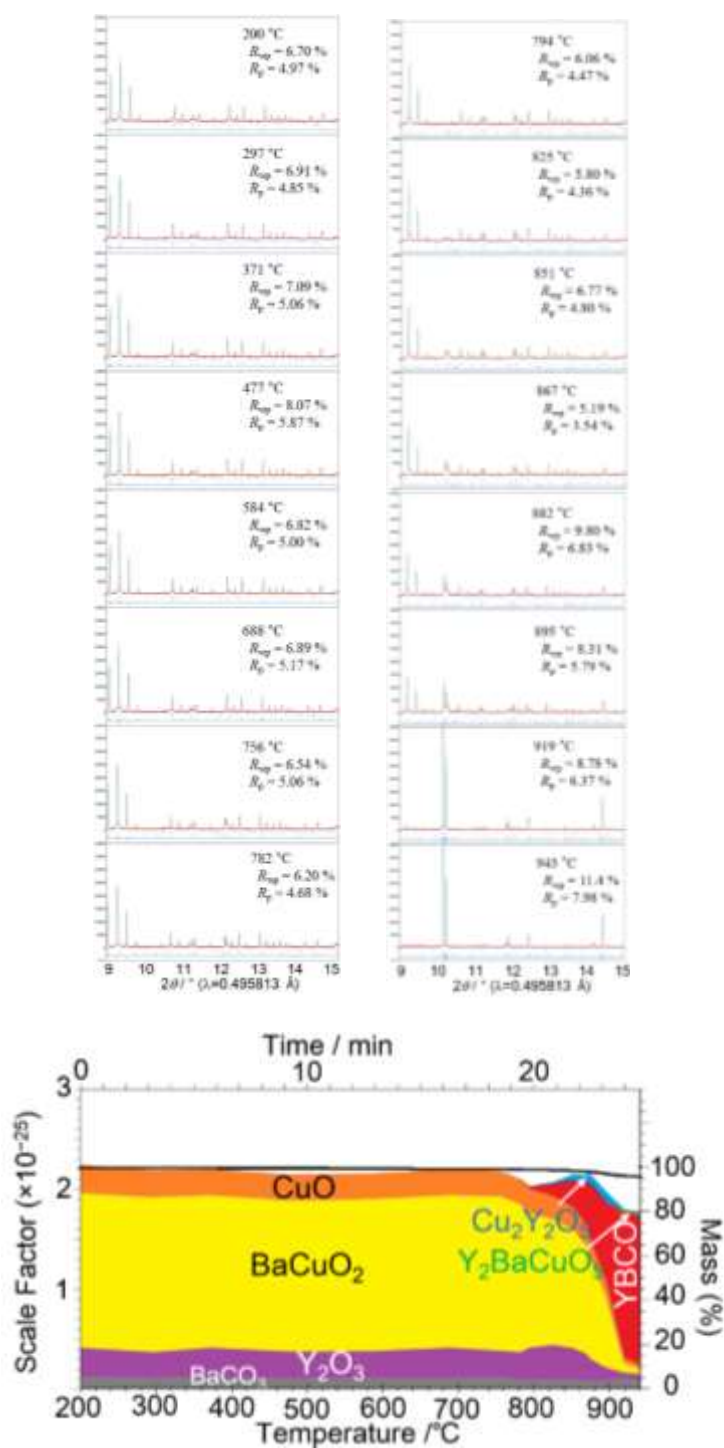


Figure S5. Rietveld Profiles of XRD patterns of the Y_2O_3 - $BaCuO_2$ - CuO mixture heated in air at a rate of $30\text{ }^\circ\text{C}/\text{min}$, and corresponding scale factors proportional to mass fractions of crystalline phases. Rietveld refinement was performed by RIETAN-FP. Mass measured by TG measurement is shown as a solid line. Deviation of the mass measured by TG and the sum of scale factors can be the mass of amorphous phase(s).

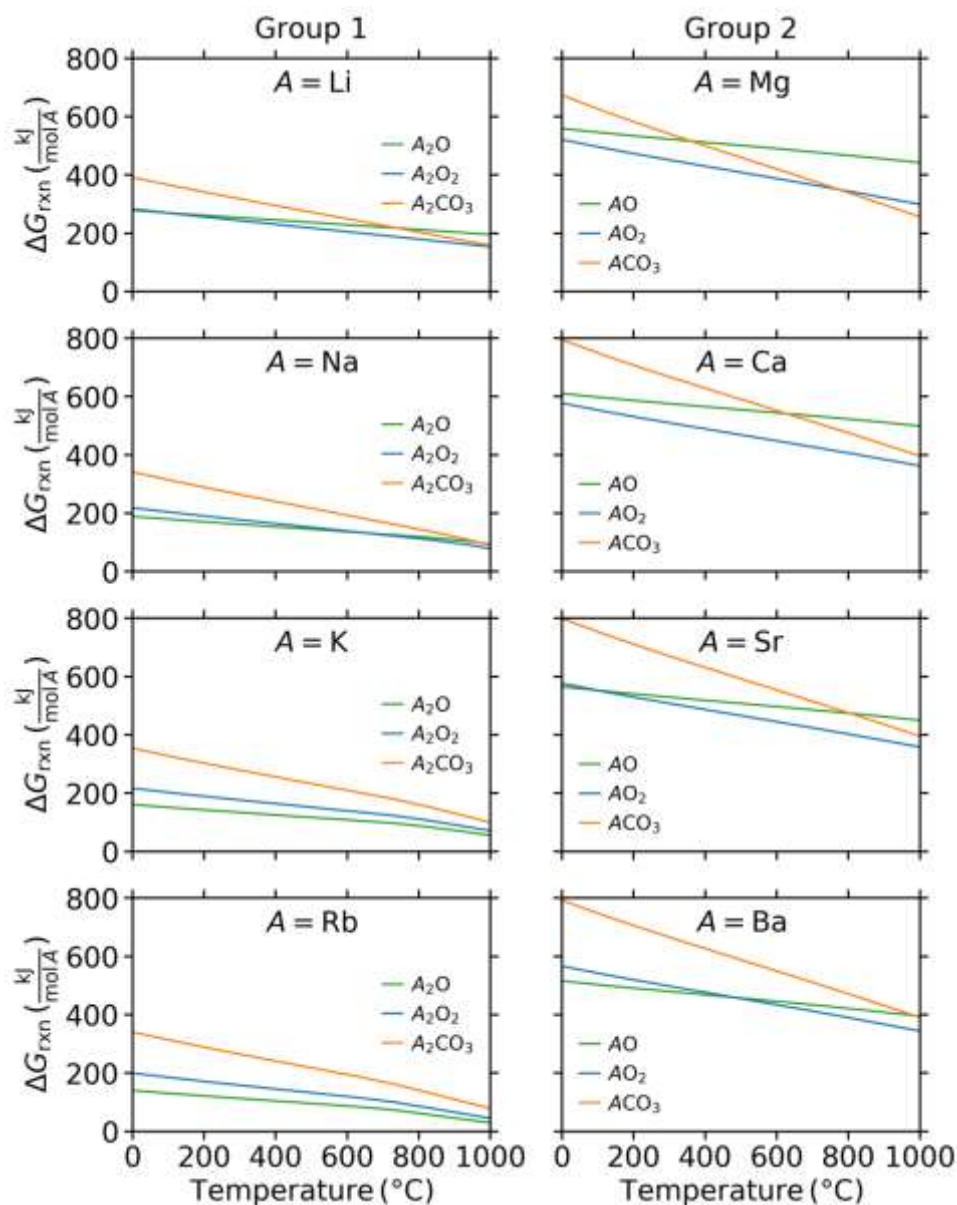


Figure S6. Energy required to liberate alkali(ne) metal cations from oxide, peroxide, and carbonate precursors. For Group 1, the involved reactions are $0.5 A_2O \rightarrow A + 0.25 O_2$ (oxide), $0.5 A_2O_2 \rightarrow A + 0.5 O_2$ (peroxide), and $0.5 A_2CO_3 \rightarrow A + 0.5 CO_2 + 0.25 O_2$ (carbonate). For the Group 2, the reactions are $AO \rightarrow A + 0.5 O_2$ (oxide), $AO_2 \rightarrow A + O_2$ (peroxide), and $ACO_3 \rightarrow A + CO_2 + 0.5 O_2$ (carbonate). Reaction energies were calculated as described in the **Methods** section for the pairwise reactions, except the Materials Project was used as the source for 0 K formation enthalpies for all solid phases.

Table S1. Synthesis recipes extracted for YBCO-related phases. Target = synthesis target; precursors = synthesis precursors; T = maximum temperature during synthesis; t = total time elapsed during heating operations; tag = Y-Ba-Cu-O if target elements are only these four elements or Y-Ba-Cu-O-* if these elements are present along with others; doi = digital object identifier for paper reporting synthesis. Note that “None” appears for T and t when synthesis operations were not successfully extracted. Recipes using BaO₂ as the Ba source are highlighted in yellow.

target	precursors	T (°C)	t (hr)	tag	doi
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	980	25	Y-Ba-Cu-O	10.1016/j.apcata.2006.03.034
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/S0167-577X(99)00202-5
Y _{1.5} Ba ₂ Cu ₃ O _x	Y ₂ O ₃ ; YBa ₂ Cu ₃ O ₇	None	None	Y-Ba-Cu-O	10.1016/j.jcrysgr.2012.04.029
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	938	24	Y-Ba-Cu-O	10.1016/S0167-577X(01)00562-6
Y ₂ BaCuO ₅	BaCO ₃ ; CuO; Y ₂ O ₃	1025	77	Y-Ba-Cu-O	10.1016/S0167-577X(02)00433-0
Y ₂ BaCuO ₅	BaCO ₃ ; CuO; Y ₂ O ₃	1025	77	Y-Ba-Cu-O	10.1016/S0167-577X(02)00433-0
YBaCuO	BaCO ₃ ; CuO; Y ₂ O ₃	950	20	Y-Ba-Cu-O	10.1016/S0038-1098(02)00714-7
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	930	24	Y-Ba-Cu-O	10.1016/S0921-5107(97)00213-4
YBa ₂ Cu ₃ O _{7-x}	Ba(CH ₃ COO) ₂ ; Cu(CH ₃ COO) ₂ ·H ₂ O Y(NO ₃) ₃ ·6H ₂ O	None	None	Y-Ba-Cu-O	10.1016/S0925-8388(99)00076-6
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/S0925-8388(99)00076-6
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	920	12	Y-Ba-Cu-O	10.1016/S0167-577X(02)00795-4
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	1000	34	Y-Ba-Cu-O	10.1016/j.elspec.2014.02.006
YBa ₂ Cu ₃ O ₇	BaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.radmeas.2004.01.005
YBa ₂ Cu ₄ O ₈	Ba(CH ₃ COO) ₂ ; Cu(CH ₃ COO) ₂ ·H ₂ O; Y ₂ O ₃	820	50	Y-Ba-Cu-O	10.1016/S0955-2219(00)00206-5

YBaCuO	BaCO ₃ ; CuO; Y ₂ O ₃	950	20	Y-Ba-Cu-O	10.1016/S0038-1098(02)00714-7
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	180	25	Y-Ba-Cu-O	10.1016/j.eurpolymj.2008.10.020
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	1060	28	Y-Ba-Cu-O	10.1016/s0040-6090(99)00717-8
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	940	78	Y-Ba-Cu-O	10.1016/s0925-4005(99)00089-1
YBa ₂ Cu ₃ O _{7-x}	Ba(NO ₃) ₂ ; Cu(NO ₃) ₂ ·3H ₂ O; Y(NO ₃) ₃ ·6H ₂ O; NH ₃	None	None	Y-Ba-Cu-O	10.1039/c2cp23046a
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	1060	28	Y-Ba-Cu-O	10.1016/S0040-6090(99)00717-8
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/s0167-577x(99)00202-5
Y Ba ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.ssc.2008.11.010
YBa ₂ Cu ₃ O _y	BaO ₂ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.physc.2004.01.088
Y ₂ BaCuO ₅	BaO ₂ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.physc.2004.01.088
Y _{1.8} Ba _{2.4} Cu _{3.4} O _x +0.5 CeO ₂ + 0.7 w% Sm ₂ O ₃	BaCO ₃ ; CeO ₂ ; CuO; Sm ₂ O ₃ ; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.jeurceramsoc.2018.01.026
YBa ₂ Cu ₃ O _{7-x}	BaCuO ₂ ; CuO; Y ₂ BaCuO ₅	None	None	Y-Ba-Cu-O	10.1007/s10854-007-9468-1
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.physc.2004.03.216
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	950	6	Y-Ba-Cu-O	10.1016/j.physc.2004.03.240
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	940	24	Y-Ba-Cu-O	10.1016/j.physc.2004.11.003
YBa ₂ Cu ₃ O _{7-x}	BaO ₂ ; CuO; Y ₂ O ₃	940	10	Y-Ba-Cu-O	10.1016/j.physc.2010.11.005
YBa ₂ Cu ₃ O _{7-x}	Ba(NO ₃) ₂ ; Cu(NO ₃) ₂ ·3H ₂ O; Y(NO ₃) ₃ ·6H ₂ O; NH ₃	None	None	Y-Ba-Cu-O	10.1039/C2CP23046A
Y ₂ BaCuO ₅	Ba(NO ₃) ₂ ; Cu(NO ₃) ₂ ·3H ₂ O; Y(NO ₃) ₃ ·6H ₂ O; NH ₃	None	None	Y-Ba-Cu-O	10.1016/j.physc.2013.04.064
YBa ₂ Cu ₃ O ₇	Ba(CH ₃ COO) ₂ ; Cu(CH ₃ COO) ₂ ; Y(OH) ₃	None	None	Y-Ba-Cu-O	10.1016/j.physc.2015.02.003

YBa ₂ Cu ₃ O ₇	Ba(CH ₃ COO) ₂ ; Cu(CH ₃ COO) ₂ ; Y(CH ₃ COO) ₃	None	None	Y-Ba-Cu-O	10.1016/j.physc.2016.04.004
YBa ₂ Cu ₃ O ₇	Ba(NO ₃) ₂ ; Cu(NO ₃) ₂ ·3H ₂ O; Y(NO ₃) ₃ ·6H ₂ O	930	43	Y-Ba-Cu-O	10.1016/j.physc.2018.02.010
Y ₃ Ba ₅ Cu ₈ O ₁₉	Ba(NO ₃) ₂ ; Cu(NO ₃) ₂ ·3H ₂ O; Y(NO ₃) ₃ +6H ₂ O	790	14	Y-Ba-Cu-O	10.1016/j.physc.2018.02.050
YBa ₂ Cu ₄ O ₈	Ba(CH ₃ COO) ₂ ; Cu(CH ₃ COO) ₂ ·H ₂ O; Y ₂ O ₃	800	70	Y-Ba-Cu-O	10.1016/s0040-6031(99)00285-3
YBa ₂ Cu ₃ O ₇	BaCO ₃ ; CuO; Y ₂ O ₃	800	20	Y-Ba-Cu-O	10.1016/j.physc.2005.09.005
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	980	21	Y-Ba-Cu-O	10.1016/j.memsci.2003.12.011
YBa ₂ Cu ₃ O _{6.71}	BaO; CuO; Y ₂ O ₃	950	30	Y-Ba-Cu-O	10.1016/j.physc.2006.03.088
YBa ₂ Cu ₃ O _{7-x}	BaO ₂ ; CuO; Y ₂ O ₃	1100	36	Y-Ba-Cu-O	10.1016/j.jpcs.2013.04.025
YBa ₂ Cu ₃ O _y	BaCO ₃ ; CuO; Y ₂ O ₃	950	32	Y-Ba-Cu-O	10.1016/j.physc.2007.01.033
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	950	32	Y-Ba-Cu-O	10.1016/j.physc.2007.03.108
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.physc.2007.04.234
YBa ₂ Cu ₄ O ₈	BaCO ₃ ; CuO; Y ₂ O ₃	935	110	Y-Ba-Cu-O	10.1103/PhysRevB.70.144515
YBa ₂ Cu ₃ O _{7-d}	BaCO ₃ ; CuO; Y ₂ O ₃	930	48	Y-Ba-Cu-O	10.1021/cm020747j
YBa ₂ Cu ₃ O _{7-x}	BaCuO ₂ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.physc.2007.05.001
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.jqsrt.2004.09.023
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	1045	200	Y-Ba-Cu-O	10.1016/j.physc.2007.07.010
Y ₂ BaCuO _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	1045	200	Y-Ba-Cu-O	10.1016/j.physc.2007.07.010
YBa ₂ Cu ₄ O ₈	Ba(CH ₃ COO) ₂ ; Cu(CH ₃ COO) ₂ ·H ₂ O; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.chemphys.2006.04.007

YBa ₂ Cu ₃ O _x	BaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/S0921-4534(00)01520-3
Y ₂ BaCuO ₅	BaCO ₃ ; CuO; Y ₂ O ₃	1050	12	Y-Ba-Cu-O	10.1016/s0925-8388(98)00427-7
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.physc.2008.01.007
Y ₂ BaCuO ₅	BaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/j.physc.2008.01.007
YBa ₂ Cu ₃ O _x	BaCO ₃ ; CuO; Y ₂ O ₃	900	8	Y-Ba-Cu-O	10.1016/s0925-8388(98)00664-1
YBa ₂ Cu ₃ O _x	BaCO ₃ ; CuO; Y ₂ O ₃	950	32	Y-Ba-Cu-O	10.1016/j.physc.2008.12.002
YBa ₂ Cu ₃ O ₇	BaCO ₃ ; CuO; Y ₂ O ₃	900	72	Y-Ba-Cu-O	10.1021/ja9706920
YBa ₂ Cu ₃ O _x	BaCO ₃ ; CuO; Y ₂ O ₃	945	16	Y-Ba-Cu-O	10.1016/s0925-8388(99)00115-2
Y ₂ BaCuO ₅	BaO; CuO; Y ₂ O ₃	880	24	Y-Ba-Cu-O	10.1016/j.physc.2009.05.019
YBa _{2-x} Na _x Cu ₃ O _y +40mol%Y ₂ BaCuO ₅	BaCO ₃ ; CuO; Na ₂ C ₂ O ₄ ; Y ₂ O ₃	1050	150	Y-Ba-Cu-O	10.1016/S0921-4534(01)00150-2
YBa ₂ Cu ₃ O _{7-y}	BaCO ₃ ; CuO; Y ₂ O ₃	950	30	Y-Ba-Cu-O	10.1016/j.physc.2009.05.106
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	930	72	Y-Ba-Cu-O	10.1016/j.cryogenics.2015.05.011
Y ₃ Ba ₅ Cu ₈ O ₁₈	BaCO ₃ ; CuO; Y ₂ O ₃	840	12	Y-Ba-Cu-O	10.1016/j.physc.2009.09.003
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	950	8	Y-Ba-Cu-O	10.1016/j.physc.2009.11.034
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	925	32	Y-Ba-Cu-O	10.1016/j.jmmm.2010.04.002
Y ₂ Ba ₅ Cu ₇ O _x	BaCO ₃ ; CuO; Y ₂ O ₃	850	48	Y-Ba-Cu-O	10.1016/j.ssc.2016.02.017
Y ₂ BaCuO ₅	BaCO ₃ ; CuO; Y ₂ O ₃	900	60	Y-Ba-Cu-O	10.1016/S0921-4534(01)00624-4
Y ₂ BaCuO ₅	BaCO ₃ ; CuO; YBa ₂ Cu ₃ O _{7-x}	None	None	Y-Ba-Cu-O	10.1016/j.physc.2010.05.012
YBa ₂ Cu ₃ O _{7-x}	BaCO ₃ ; CuO; Y ₂ O ₃	950	16	Y-Ba-Cu-O	10.1016/S0921-4534(01)00831-0
YBa ₂ Cu ₄ O ₈	Ba(CH ₃ COO) ₂ ; Cu(CH ₃ COO) ₂ ·H ₂ O; Y ₂ O ₃	None	None	Y-Ba-Cu-O	10.1016/S0924-2031(01)00157-6
YBa ₂ Cu ₃ O _y	BaO; CuO; Y ₂ O ₃	910	12	Y-Ba-Cu-O	10.1016/j.physc.2010.05.236

Y_2BaCuO_5	BaO; CuO; Y_2O_3	910	12	Y-Ba-Cu-O	10.1016/j.physc.2010.05.236
Y_2BaCuO_5	$BaCO_3$; CuO; Y_2O_3	None	None	Y-Ba-Cu-O	10.1016/j.jcrysro.2005.01.094
$YBa_2Cu_3O_y$	$Ba(NO_3)_2$; $Cu(NO_3)_2 \cdot 3H_2O$; Y_2O_3	None	None	Y-Ba-Cu-O	10.1016/j.mseb.2003.11.015
$YBa_2Cu_3O_7$	$BaCO_3$; CuO; Y_2O_3	940	144	Y-Ba-Cu-O	10.1039/c4ta06767c
Y_2BaCuO_5	$BaCuO_2$; Y_2O_3	820	20	Y-Ba-Cu-O	10.1016/S0921-4534(01)00968-6
$YBa_2Cu_3O_{7-x}$	BaO_2 ; CuO; Y_2O_3	940	10	Y-Ba-Cu-O	10.1016/j.physc.2010.11.005
$YBa_2Cu_3O_y$	$BaCO_3$; CuO; Y_2O_3	950	32	Y-Ba-Cu-O	10.1016/j.physc.2010.12.012
$YBa_2Cu_3O_{7-x}$	$BaCO_3$; CuO; Y_2O_3	950	10	Y-Ba-Cu-O	10.1016/S0921-4534(02)01318-7
$YBa_2Cu_3O_y$	$BaCO_3$; CuO; Y_2O_3	950	20	Y-Ba-Cu-O	10.1016/j.physc.2011.10.003
$YBa_2Cu_3O_{7-x}$	$BaCO_3$; CuO; Y_2O_3	None	None	Y-Ba-Cu-O	10.1016/j.physc.2012.05.012
$YBa_2Cu_3O_{7-x}$	$BaCO_3$; CuO; Y_2O_3	938	24	Y-Ba-Cu-O	10.1016/S0167-577X(01)00562-6
$YBa_2Cu_3O_{7-x}$	BaO; CuO; Y_2O_3	None	None	Y-Ba-Cu-O	10.1016/j.solidstatesciences.2005.07.002
Y_2BaCuO_5	$BaCO_3$; CuO; Y_2O_3	1025	77	Y-Ba-Cu-O	10.1016/S0167-577X(02)00433-0
Y_2BaCuO_5	$BaCO_3$; CuO; Y_2O_3	1025	77	Y-Ba-Cu-O	10.1016/S0167-577X(02)00433-0
$YBa_2Cu_3O_{7-x}$	BaO; CuO; Y_2O_3	None	None	Y-Ba-Cu-O	10.1016/j.jssc.2010.01.006
$Y_{1.5}Ba_2Cu_3O_{7-x}$	Y_2O_3 ; $YBa_2Cu_3O_7$	None	None	Y-Ba-Cu-O	10.1016/j.physc.2013.04.028
$Y_{1.5}Ba_2Cu_3O_{7-x}$	Y_2O_3 ; $YBa_2Cu_3O_7$	None	None	Y-Ba-Cu-O	10.1016/j.physc.2013.04.084
$YBa_2Cu_3O_y$	$BaCO_3$; CuO; Y_2O_3	950	20	Y-Ba-Cu-O	10.1016/j.physc.2013.12.006
$YBa_2Cu_3O_y$	$BaCO_3$; CuO; Y_2O_3	900	94	Y-Ba-Cu-O	10.1016/S0921-4534(02)02058-0
$Y_3Ba_5Cu_8O_{18\pm x}$	$BaCO_3$; CuO; Y_2O_3	950	60	Y-Ba-Cu-O	10.1007/s00339-017-1547-4
$YBa_2Cu_3O_{7-x}$	$BaCO_3$; CuO; Y_2O_3	950	60	Y-Ba-Cu-O	10.1007/s00339-017-1547-4
Y_2BaCuO_5	$BaCO_3$; CuO; Y_2O_3	900	94	Y-Ba-Cu-O	10.1016/S0921-4534(02)02058-0

$\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$	BaCO_3 ; CuO ; Y_2O_3	980	34	Y-Ba-Cu-O	10.1016/j.ssc.2004.04.044
$\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$	Ag_2O ; BaO ; CuO ; Y_2O_3	950	74	Y-Ba-Cu-O	10.1016/j.ssc.2004.05.015
Y_2BaCuO_5	BaCO_3 ; CuO ; Y_2O_3	900	24	Y-Ba-Cu-O	10.1016/j.physc.2014.05.009
$\text{Y}_{1.6}\text{Ba}_{2.3}\text{Cu}_{3.3}\text{O}_y$	BaCO_3 ; CuO ; Y_2O_3	1400	26	Y-Ba-Cu-O	10.1016/S0921-4534(02)02539-x
$\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$	BaCu_3 ; CuO ; Y_2O_3	920	12	Y-Ba-Cu-O	10.1016/S0167-577X(02)00795-4
$\text{YBa}_2\text{Cu}_3\text{O}_y$	BaCO_3 ; CuO ; Y_2O_3	925	74	Y-Ba-Cu-O	10.1016/j.physc.2016.11.003
$\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$	BaCO_3 ; CuO ; Y_2O_3	None	None	Y-Ba-Cu-O	10.1103/PhysRevB.93.054523
$\text{Y}_3\text{Ba}_5\text{Cu}_8\text{O}_{19}$	BaCO_3 ; CuO ; Y_2O_3	840	24	Y-Ba-Cu-O	10.1016/j.physc.2018.02.050
$\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$	BaCO_3 ; CuO ; Y_2O_3	None	None	Y-Ba-Cu-O	10.1111/j.1551-2916.2008.02900.x
$\text{Y}_3\text{Ba}_5\text{Cu}_8\text{O}_{18}$	$\text{Ba}(\text{NO}_3)_2$; CuO ; Y_2O_3	900	72	Y-Ba-Cu-O	10.1016/j.solidstatesciences.2011.08.024
$\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$	BaCO_3 ; CuO ; Y_2O_3	945	24	Y-Ba-Cu-O	10.1007/s10854-013-1212-4
$\text{YBa}_2\text{Cu}_3\text{O}_7$	BaCO_3 ; CuO ; Y_2O_3	900	72	Y-Ba-Cu-O	10.1021/ja9706920
$\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$	BaCO_3 ; CuO ; Y_2O_3	980	21	Y-Ba-Cu-O	10.1016/j.ssi.2004.10.003
$\text{YBa}_2\text{Cu}_4\text{O}_8$	$\text{Ba}(\text{CH}_3\text{COO})_2$; $\text{Cu}(\text{CH}_3\text{COO})_2 \cdot \text{H}_2\text{O}$; Y_2O_3	None	None	Y-Ba-Cu-O	10.1016/s0924-2031(01)00157-6
$\text{Y}_{1-x}\text{Pr}_x\text{Ba}_2\text{Cu}_3\text{O}_{7-x}$	BaCO_3 ; CuO ; Pr_6O_{11} ; Y_2O_3	935	36	Y-Ba-Cu-O-*	10.1016/s0167-577x(01)00577-8
$\text{Y}_2\text{Ba}(\text{Cu}_{1-x}\text{Mg}_x)\text{O}_5$	BaCO_3 ; CuO ; MgO ; Y_2O_3	1000	12	Y-Ba-Cu-O-*	10.1016/s0955-2219(03)00548-x
$\text{YBa}_{2-x}\text{La}_x\text{Cu}_3\text{O}_y$	BaCO_3 ; CuO ; La_2O_3 ; Y_2O_3	920	42	Y-Ba-Cu-O-*	10.1016/S0038-1098(00)00360-4
$(\text{La}_{1-x}\text{Y}_x)_2\text{Ba}_2\text{CaCu}_5\text{O}_z$	BaCO_3 ; CaCO_3 ; CuO ; La_2O_3 ; Y_2O_3	900	48	Y-Ba-Cu-O-*	10.1016/j.ssc.2006.03.035
$\text{Y}_{1-y}\text{Yb}_y\text{Ba}_2\text{Cu}_3\text{O}_x$	BaCO_3 ; CuO ; Y_2O_3 ; Yb_2O_3	None	None	Y-Ba-Cu-O-*	10.1103/PhysRevB.79.054519
$\text{Y}_2\text{Ba}(\text{Cu}_{1-x}\text{Ni}_x)\text{O}_5$	BaCO_3 ; CuO ; NiO ; Y_2O_3	1300	32	Y-Ba-Cu-O-*	10.1016/S0921-5107(00)00566-3
$\text{Ba}(\text{Zr}_{0.84}\text{Y}_{0.15}\text{Cu}_{0.01})\text{O}_{3-x}$	BaCO_3 ; CuO ; Y_2O_3 ; ZrO_2	1300	2	Y-Ba-Cu-O-*	10.1007/s10008-013-2187-z

$Y(Ba_{1-x}Sr_x)_2Cu_3O_{7-x}$	BaCO ₃ ; CuO; SrCO ₃ ; Y ₂ O ₃	930	24	Y-Ba-Cu-O-*	10.1016/j.ssc.2006.07.026
$YBa_2(Cu_{1-x}Ni_x)_3O_{7-x}$	BaCO ₃ ; CuO; Ni ₂ O ₃ ; Y ₂ O ₃	None	None	Y-Ba-Cu-O-*	10.1016/S0038-1098(01)00490-2
YBaCuFeO ₅	BaCO ₃ ; CuO; Fe ₂ O ₃ ; Y ₂ O ₃	1150	72	Y-Ba-Cu-O-*	10.1016/j.jcrysro.2014.12.020
$(La_{1-x}Y_x)_2Ba_2CaCu_5O_z$	BaCO ₃ ; CaCO ₃ ; CuO; La ₂ O ₃ ; Y ₂ O ₃	900	48	Y-Ba-Cu-O-*	10.1016/j.ssc.2006.09.008
$Y_{1-x}Nd_xBa_2Cu_3O_{7-x}$	BaCO ₃ ; CuO; Nd ₂ O ₃ ; Y ₂ O ₃	930	46	Y-Ba-Cu-O-*	10.1016/j.jmatprotec.2007.12.078
$Y_{1-x}Ca_xBa_2Cu_{2.85}Re_{0.15}O_z$	BaCO ₃ ; CaO; CuO; ReO ₃ ; Y ₂ O ₃	None	None	Y-Ba-Cu-O-*	10.1016/s0038-1098(99)00085_x
YBaCuFeO ₅	BaCO ₃ ; CuO; Fe ₂ O ₃ ; Y ₂ O ₃	1150	100	Y-Ba-Cu-O-*	10.1038/ncomms13758
$YBa_2(Cu_{1-x}Mn_x)_4O_8$	Ba(CH ₃ COO) ₂ ; Cu(CH ₃ COO) ₂ ·H ₂ O; Mn(CH ₃ COO) ₂ ; Y ₂ O ₃	820	50	Y-Ba-Cu-O-*	10.1016/s0955-2219(00)00206-5
$Y_{0.7}Ca_{0.3}Ba_2Cu_3O_yF_x$	BaCO ₃ ; CaCO ₃ ; CaF ₂ ; CuO; Y ₂ O ₃	920	84	Y-Ba-Cu-O-*	10.1016/j.jmmm.2003.11.105
$Y_{0.5}Nd_{0.5}Ba_2Cu_3O_x$	BaCO ₃ ; CuO; Nd ₂ O ₃ ; Y ₂ O ₃	900	48	Y-Ba-Cu-O-*	10.1016/S0022-0248(99)00391-7
$(La_{2-x}Y_x)Ba_2(Ca_yCu_{4+y})O_z$	BaCO ₃ ; CaCO ₃ ; CuO; La ₂ O ₃ ; Y ₂ O ₃	950	84	Y-Ba-Cu-O-*	10.1016/s0167-577x(98)00067-6
$YBa_{2-x}La_xCu_3O_{7-x}$	BaCO ₃ ; CuO; La ₂ O ₃ ; Y ₂ O ₃	1203	72	Y-Ba-Cu-O-*	10.1016/s1293-2558(03)00187-0
$YBa_{2-x}La_xCu_3O_y$	BaCO ₃ ; CuO; La ₂ O ₃ ; Y ₂ O ₃	950	1000	Y-Ba-Cu-O-*	10.1016/j.physc.2003.09.002
$YBa_{2-x}Na_xCu_3O_{y+40}$	BaCO ₃ ; CuO; Na ₂ C ₂ O ₄ ; Y ₂ O ₃	1040	174	Y-Ba-Cu-O-*	10.1016/s0167-577x(99)00178-0
$Cu_{1-0.75x}(Sr_{2x}Ba_{2-2x})(Ca_{0.5x}Y_{1-0.5x})Cu_2O_y$	BaCO ₃ ; CaCO ₃ ; CuO; SrCO ₃ ; Y ₂ O ₃	970	15	Y-Ba-Cu-O-*	10.1016/s0022-3697(01)00117-2
$YBa_2Cu_3F_{0.4}O_x$	YBa ₂ Cu ₃ F ₄ O _x ; YBa ₂ Cu ₃ O _x	900	8	Y-Ba-Cu-O-*	10.1016/S0924-0136(99)00474-4
$Y_{1-x}La_xBa_2Cu_3O_{7-x}$	BaCO ₃ ; CuO; La ₂ O ₃ ; Y ₂ O ₃	970	41	Y-Ba-Cu-O-*	10.1016/j.mseb.2006.12.007
$Y_{1-y}CaYBa_2Cu_3O_{7-x}$	BaCO ₃ ; CaCO ₃ ; CuO; Y ₂ O ₃	970	41	Y-Ba-Cu-O-*	10.1016/j.mseb.2006.12.007
$Y_{1-x}Ca_xBaCuFeO_{5+x}$	BaCO ₃ ; CaCO ₃ ; CuO; Fe ₂ O ₃ ; Y ₂ O ₃	None	None	Y-Ba-Cu-O-*	10.1016/j.solidstatesciences.2011.10.021
$Y_{1-x}Ca_xBa_2Cu_3O_z$	BaCO ₃ ; CaCO ₃ ; CuO; Y ₂ O ₃	950	48	Y-Ba-Cu-O-*	10.1016/j.physc.2004.01.002
$TlBa_2Y_{1-x}Ca_xCu_2O_{7+x}$	BaO ₂ ; CaO; CuO; Tl ₂ O ₃ ; Y ₂ O ₃	None	None	Y-Ba-Cu-O-*	10.1016/s0022-3697(02)00087-2

$Y_2Ba_4CuWO_{10.8}$	BaCO ₃ ; CuO; WO ₃ ; Y ₂ O ₃	None	None	Y-Ba-Cu-O-*	10.1016/j.jeurceramsoc.2018.01.026
$Y_2Ba_4CuWO_x$	BaCO ₃ ; CuO; WO ₃ ; Y ₂ O ₃	None	None	Y-Ba-Cu-O-*	10.1016/j.jeurceramsoc.2018.01.026
$Ba(Zr_{0.84}Y_{0.15}Cu_{0.01})O_{3-x}$	BaCO ₃ ; CuO; Y ₂ O ₃ ; ZrO ₂	1500	42	Y-Ba-Cu-O-*	10.1016/j.jpowsour.2016.09.129
$Y_{1-x}Ca_xBa_2Cu_3O_y$	BaCO ₃ ; CaCO ₃ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O-*	10.1016/s0254-0584(01)00545-4
$YBa_2Cu_{3-x}GdxO_{7-x}$	BaCO ₃ ; CuO; Gd ₂ O ₃ ; Y ₂ O ₃	930	24	Y-Ba-Cu-O-*	10.1016/j.physc.2004.10.008
$(Y_{0.74}Ca_{0.26})Ba_2Cu_3O_{7-x}$	BaCO ₃ ; CaCO ₃ ; CuO; Y ₂ O ₃	980	102	Y-Ba-Cu-O-*	10.1016/j.jpics.2010.10.079
$(Y_{0.84}La_{0.16})(Ba_{1.74}La_{0.26})Cu_3O_{7-x}$	BaCO ₃ ; CuO; La ₂ O ₃ ; Y ₂ O ₃	980	102	Y-Ba-Cu-O-*	10.1016/j.jpics.2010.10.079
$YBa_2Cu_{3-x}GdxO_{7-x}$	BaCO ₃ ; CuO; Gd ₂ O ₃ ; Y ₂ O ₃	930	24	Y-Ba-Cu-O-*	10.1016/j.physc.2004.10.008
$Fe_{0.5}Cu_{0.5}Ba_2YCu_2O_{7.41}$	BaCO ₃ ; CuO; Fe ₂ O ₃ ; Y ₂ O ₃	930	110	Y-Ba-Cu-O-*	10.1016/j.physc.2004.11.002
$Y_{0.8}Ca_{0.2}Ba_2Cu_3O_y$	BaCO ₃ ; CaCO ₃ ; CuO; Y ₂ O ₃	920	96	Y-Ba-Cu-O-*	10.1016/j.physc.2004.11.006
$YBa_2(Cu_{1-x}Zn_x)_3O_{7-x}$	BaCO ₃ ; CuO; Y ₂ O ₃ ; ZnO	1050	148	Y-Ba-Cu-O-*	10.1016/j.physc.2010.01.032
$Y_{1-x}Ca_xBa_2Cu_3O_{7-x}$	BaCO ₃ ; CaO; CuO; Y ₂ O ₃	920	48	Y-Ba-Cu-O-*	10.1016/j.physc.2005.01.002
$(Hg_{0.5}Pb_{0.5})(Sr_{2-x}Ba_x)(Ca_{0.7}Y_{0.3})Cu_2O_{7-d}$	BaO ₂ ; CaO; CuO; HgO; PbO; SrO ₂ ; Y ₂ O ₃	970	24	Y-Ba-Cu-O-*	10.1021/ic9611249
$Y_2Ba_4CuNbO_y$	BaCO ₃ ; CuO; Nb ₂ O ₅ ; Y ₂ O ₃	None	None	Y-Ba-Cu-O-*	10.1016/j.physc.2005.02.060
$Y_{0.92}Ta_{0.08}Ba_2Cu_3O_y$	BaCO ₃ ; CuO; Ta ₂ O ₅ ; Y ₂ O ₃	900	36	Y-Ba-Cu-O-*	10.1016/j.physc.2005.03.010
$(Cu_{1-x}Co_x)(Ba_{1-y}Sr_y)_2(Y_{1-z}Ca_z)Cu_2O_{7+x}$	BaCO ₃ ; CaCO ₃ ; Co ₃ O ₄ ; CuO; SrCO ₃ ; Y ₂ O ₃	940	48	Y-Ba-Cu-O-*	10.1016/j.physc.2005.04.034
$YBaCuCoO_{5+x}$	Ba(NO ₃) ₂ ; Co(NO ₃) ₂ ·6H ₂ O; Cu(NO ₃) ₂ ·6H ₂ O; Y ₂ O ₃	1000	3	Y-Ba-Cu-O-*	10.1002/fuce.201400141
$Y_{1+x}Sb_xBa_2Cu_3O_z$	BaCO ₃ ; CuO; Sb ₂ O ₃ ; Y ₂ O ₃	800	20	Y-Ba-Cu-O-*	10.1016/j.physc.2005.09.005
$YBa_2Cu_{3-x}Ca_xO_{7-y}$	BaCO ₃ ; CaO; CuO; Y ₂ O ₃	940	72	Y-Ba-Cu-O-*	10.1016/j.sna.2012.06.015
$YBa_2Cu_{2.99}Li_{0.01}O_y + 0.4Y_2BaCuO_5$	BaCO ₃ ; CuO; Li ₂ CO ₃ ; Y ₂ O ₃	1035	48	Y-Ba-Cu-O-*	10.1016/j.physc.2006.02.012
$YBa_{2-x}K_xCu_3O_y$	BaCO ₃ ; CuO; K ₂ CO ₃ ; Y ₂ O ₃	920	40	Y-Ba-Cu-O-*	10.1016/j.physc.2006.03.093

$Y_{1-x}B_xBa_2Cu_3O_y$	B_2O_3 ; Ba_2CO_3 ; CuO ; Y_2O_3	950	28	Y-Ba-Cu-O-*	10.1016/j.physc.2006.03.135
$Y_{0.95}Pr_{0.05}Ba_2(Cu_{1-x}Mn_x)_3O_{7-x}$	$BaCO_3$; CuO ; MnO_2 ; Pr_6O_{11} ; Y_2O_3	915	24	Y-Ba-Cu-O-*	10.1016/j.physc.2006.08.002
$Cu_{1-0.75x}(Sr_{2x}Ba_{2-2x})(Ca_{0.5x}Y_{1-0.5x})Cu_2O_y$	$BaCO_3$; $CaCO_3$; CuO ; $SrCO_3$; Y_2O_3	970	15	Y-Ba-Cu-O-*	10.1016/S0022-3697(01)00117-2
$YBa_2(Cu_{1-x}Zn_x)_3O_{6+x}$	$BaCO_3$; CuO ; Y_2O_3 ; ZnO	None	None	Y-Ba-Cu-O-*	10.1016/S0921-4534(00)00118-0
$YBa_2Cu_{3-x}M_xO_y$	Al_2O_3 ; $BaCO_3$; CuO ; Y_2O_3	920	12	Y-Ba-Cu-O-*	10.1103/PhysRevB.69.224517
$YBa_2Cu_{3-x}M_xO_y$	$BaCO_3$; CuO ; Y_2O_3 ; ZnO	920	12	Y-Ba-Cu-O-*	10.1103/PhysRevB.69.224517
$Y_{0.38}La_{0.62}(Ba_{0.82}La_{0.18})_2Cu_3O_y$	$BaCO_3$; CuO ; La_2O_3 ; Y_2O_3	980	90	Y-Ba-Cu-O-*	10.1103/PhysRevB.86.045124
$TlBa_2Y_{1-x}Ca_xCu_2O_{7+x}$	BaO_2 ; CaO ; CuO ; Tl_2O_3 ; Y_2O_3	None	None	Y-Ba-Cu-O-*	10.1016/S0022-3697(02)00087-2
$HgBa_2(Ca_{1-x}Y_x)Cu_2O_y$	BaO ; CaO ; CuO ; HgO ; Y_2O_3	720	22	Y-Ba-Cu-O-*	10.1016/S0921-4534(00)00205-7
$YBa_2(Cu_{3-x}Sc_x)O_y$	$BaCO_3$; CuO ; Sc_2O_3 ; Y_2O_3	967	72	Y-Ba-Cu-O-*	10.1016/j.physc.2007.04.043
$Y_{(1-x)}Ce_xBa_2Cu_3O_7$	$BaCO_3$; CeO_2 ; CuO ; Y_2O_3	930	160	Y-Ba-Cu-O-*	10.1016/j.physc.2007.04.046
$YBa_{2-x}La_xCu_3O_{7-x}$	$BaCO_3$; CuO ; La_2O_3 ; Y_2O_3	1203	72	Y-Ba-Cu-O-*	10.1016/S1293-2558(03)00187-0
$Y(Ba_{2-x}Sr_x)Cu_3O_{6.95}$	$BaCO_3$; CuO ; $SrCO_3$; Y_2O_3	950	60	Y-Ba-Cu-O-*	10.1016/S0921-4534(00)00293-8
$Y_{1-x}Ca_xBa_2Cu_3O_y$	$BaCO_3$; $CaCO_3$; CuO ; Y_2O_3	750	15	Y-Ba-Cu-O-*	10.1103/PhysRevB.70.214517
$YBa_{2-x}M_xCu_3O_y$	$BaCO_3$; CuO ; $NaNO_3$; Y_2O_3	950	12	Y-Ba-Cu-O-*	10.1016/S0921-4534(00)00338-5
$Y_2Ba_4CuMO_x$	$BaCO_3$; CuO ; Y_2O_3 ; ZrO_2	None	None	Y-Ba-Cu-O-*	10.1111/j.1551-2916.2007.01771.x
$Y_2Ba_4CuMO_x$	$BaCO_3$; CuO ; Nb_2O_5 ; Y_2O_3	None	None	Y-Ba-Cu-O-*	10.1111/j.1551-2916.2007.01771.x
$Y_{1-x}Ca_xBa_2Cu_3O_{7-x}$	$Ba(NO_3)_2$; $CaCO_3$; CuO ; Y_2O_3	450	1	Y-Ba-Cu-O-*	10.1016/S0921-4534(00)01530-6
$Ba(Zr_{0.84}Y_{0.15}Cu_{0.01})O_{3-x}$	$BaCO_3$; CuO ; Y_2O_3 ; ZrO_2	None	None	Y-Ba-Cu-O-*	10.1016/j.ceramint.2013.05.081
$YBa_{1.8}La_{0.2}Cu_3O_y$	$BaCO_3$; CuO ; La_2O_3 ; Y_2O_3	950	20	Y-Ba-Cu-O-*	10.1016/S0921-4534(00)01549-5
$Ba(Nd_xY_{2-x})CuO_5$	$BaCO_3$; CuO ; Nd_2O_3 ; Y_2O_3	980	44	Y-Ba-Cu-O-*	10.1016/j.jssc.2008.08.002
$YBa_2Cu_{3-x}Zn_xO_{6+x}$	CuO ; Y_2O_3 ; ZnO ; $BaCO_3$	None	None	Y-Ba-Cu-O-*	10.1016/s0925-8388(98)00577-5

$Y_{1-x}Tb_xBa_2Cu_3O_{7-x}$	BaCO ₃ ; CuO; Tb ₄ O ₇ ; Y ₂ O ₃	950	60	Y-Ba-Cu-O-*	10.1016/j.physc.2008.04.012
$YBa_2Cu_{3-x}Zn_xO_{7-x}$	BaCO ₃ ; CuO; Y ₂ O ₃ ; ZnO	970	26	Y-Ba-Cu-O-*	10.1016/S0921-4534(00)01648-8
$(La_{1-x}Y_x)_2Ba_2CaCu_5O_z$	BaCO ₃ ; CaCO ₃ ; CuO; La ₂ O ₃ ; Y ₂ O ₃	900	24	Y-Ba-Cu-O-*	10.1111/j.1551-2916.2007.01845.x
$YBa_{2-x}Sr_xCu_3O_{7-x}$	BaCO ₃ ; CuO; SrCO ₃ ; Y ₂ O ₃	950	8	Y-Ba-Cu-O-*	10.1016/S0921-4534(00)01748-2
$YBa_{2-x}Sr_xCu_3O_{7-x}$	BaCO ₃ ; CaCO ₃ ; CuO; Y ₂ O ₃	950	8	Y-Ba-Cu-O-*	10.1016/S0921-4534(00)01748-2
$Y_{1-x}Sm_xBa_2Cu_3O_{7-x}$	Ba ₂ CO ₃ ; CuO; Sm ₂ O ₃ ; Y ₂ O ₃	940	90	Y-Ba-Cu-O-*	10.1016/s0025-5408(01)00539-6
$Y_{1-x}Pr_xBa_2Cu_3O_y$	BaCO ₃ ; CuO; Pr ₂ O ₃ ; Y ₂ O ₃	930	96	Y-Ba-Cu-O-*	10.1016/j.physc.2008.05.031
$(Y_{1-x}Ca_x)SrBaCu_{2.80}(PO_4)_{0.20}O_y$	BaO; CaCO ₃ ; CuO; NH ₄ H ₂ PO ₄ ; SrCO ₃ ; Y ₂ O ₃	1000	32	Y-Ba-Cu-O-*	10.1016/S0921-4534(01)00104-6
$Y_{1-x}Ca_xBa_{2-x}La_xCu_3O_y$	BaCO ₃ ; CaCO ₃ ; CuO; La ₂ O ₃ ; Y ₂ O ₃	930	72	Y-Ba-Cu-O-*	10.1016/j.physc.2009.05.010
$Y_{1-x}(Yb_{0.9}Nd_{0.1})_xBa_2Cu_3O_z$	BaO; CuO; Nd ₂ O ₃ ; Y ₂ O ₃ ; Yb ₂ O ₃	910	12	Y-Ba-Cu-O-*	10.1016/j.physc.2009.05.019
$Y_{1-x}Pr_xBa_2Cu_3O_y$	BaCO ₃ ; CuO; Pr ₂ O ₃ ; Y ₂ O ₃	930	96	Y-Ba-Cu-O-*	10.1016/j.physc.2009.05.119
$Y_2Ba_4CuNbO_y$	BaCO ₃ ; CuO; Nb ₂ O ₅ ; Y ₂ O ₃	None	None	Y-Ba-Cu-O-*	10.1016/j.physc.2009.05.194
$Y_xNd_{1-x+y}Ba_{2-y}Cu_3O_{6+x}$	BaCO ₃ ; CuO; Nd ₂ O ₃ ; Y ₂ O ₃	1070	174	Y-Ba-Cu-O-*	10.1016/S0921-4534(01)00351-3
$Y_{1-z}Ca_zBa_{2-z}La_xCu_3O_x$	BaCO ₃ ; CaCO ₃ ; CuO; La ₂ O ₃ ; Y ₂ O ₃	1010	24	Y-Ba-Cu-O-*	10.1016/S0921-4534(01)00366-5
$Y_{1-x}Ho_xBa_2Cu_3O_y$	$(Y_{1-x}Ho_x)_2BaCuO_5$; BaCuO ₂ ; CuO	550	40	Y-Ba-Cu-O-*	10.1016/S0921-4534(01)00368-9
$YBa_2Cu_3F_{0.4}O_x$	YBa ₂ Cu ₃ F ₄ O _x ; YBa ₂ Cu ₃ O _x	900	8	Y-Ba-Cu-O-*	10.1016/S0924-0136(99)00474-4
$YBa_2Cu_{3-x}In_xO_y$	BaCO ₃ ; CuO; In ₂ O ₃ ; Y ₂ O ₃	1233	24	Y-Ba-Cu-O-*	10.1016/j.physc.2010.05.073
$Y_{1-x}Pr_xBa_2Cu_3O_{7-d}$	BaCO ₃ ; CuO; Pr ₆ O ₁₁ ; Y ₂ O ₃	1213	183	Y-Ba-Cu-O-*	10.1021/cm9604928
$YBa_2Co_xCu_{3-x}O_{7-x}$	BaCO ₃ ; Co ₂ O ₃ ; CuO; Y ₂ O ₃	980	25	Y-Ba-Cu-O-*	10.1016/j.catcom.2006.11.029
$YBa_2Cu_{3-x}Co_xO_y$	BaCO ₃ ; Co ₂ O ₃ ; CuO; Y ₂ O ₃	900	48	Y-Ba-Cu-O-*	10.1016/S0921-4534(01)01286-2
$YBa_2Cu_{3-x}M_xO_y$	BaCO ₃ ; CuO; Fe ₂ O ₃ ; Y ₂ O ₃	900	48	Y-Ba-Cu-O-*	10.1016/S0921-4534(02)01268-6

$YBa_2Cu_{3-x}M_xO_y$	$BaCO_3; Co_3O_4; CuO; Y_2O_3$	900	48	Y-Ba-Cu-O-*	10.1016/S0921-4534(02)01268-6
$YBa_{2-x}La_xCu_3Al_xO_z$	$Al_2O_3; BaCO_3; CuO; La_2O_3; Y_2O_3$	940	66	Y-Ba-Cu-O-*	10.1016/j.physc.2012.01.013
$Y_xGd_{1-x}Ba_2Cu_3O_{7-x}$	$BaCO_3; CuO; Gd_2O_3; Y_2O_3$	950	58	Y-Ba-Cu-O-*	10.1016/S0921-4534(02)01441-7
$YBa_{2-x}La_xCu_{3-x}Zn_xO_z$	$BaCO_3; CuO; La_2O_3; Y_2O_3; ZnO$	940	66	Y-Ba-Cu-O-*	10.1016/j.physc.2012.01.013
$Y_{1-x}Ca_xBa_2Cu(Cu_{1-y}Mg_y)_3O_{7-x}$	$BaCO_3; CaCO_3; CuO; MgO; Y_2O_3$	940	24	Y-Ba-Cu-O-*	10.1016/j.physc.2012.02.031
$Y_{1-x}Sm_xBa_2Cu_3O_{7-x}$	$Ba_2CO_3; CuO; Sm_2O_3; Y_2O_3$	940	90	Y-Ba-Cu-O-*	10.1016/S0025-5408(01)00539-6
$YBaCuFeO_5$	$BaCO_3; CuO; Fe_2O_3; Y_2O_3$	1050	60	Y-Ba-Cu-O-*	10.1103/PhysRevB.91.064408
$Y_{1-x}Pr_xBa_2Cu_3O_{7-x}$	$BaCO_3; CuO; Pr_6O_{11}; Y_2O_3$	935	36	Y-Ba-Cu-O-*	10.1016/S0167-577X(01)00577-8
$Y_2Ba(Cu_{1-x}Zn_x)O_5$	$BaCO_3; CuO; Y_2O_3; ZnO$	950	30	Y-Ba-Cu-O-*	10.1016/S0955-2219(01)00097-8
$YBa_2Cu_{3-x}Gd_xO_{7-x}$	$BaCO_3; CuO; Gd_2O_3; Y_2O_3$	940	20	Y-Ba-Cu-O-*	10.1007/S10854-012-0917-0
$Ba(Zr_{0.84}Y_{0.15}Cu_{0.01})O_{3-x}$	$BaCO_3; CuO; Y_2O_3; ZrO_2$	1500	12	Y-Ba-Cu-O-*	10.1016/j.ijhydene.2014.02.072
$Y_{2-x}Dy_xBaCuO_5$	$BaCO_3; CuO; Dy_2O_3; Y_2O_3$	1000	60	Y-Ba-Cu-O-*	10.1016/j.ssc.2004.02.026
$YBa_2Cu_{3-x}Al_xO_{7-x}$	$Al_2O_3; BaCO_3; CuO; Y_2O_3$	550	24	Y-Ba-Cu-O-*	10.1016/S0921-4534(02)02057-9
$Y_{0.85}Ca_{0.15}Ba_2Cu_3O_{7-x}$	$BaCO_3; CaCO_3; CuO; Y_2O_3$	930	24	Y-Ba-Cu-O-*	10.1016/j.ssc.2004.03.002
$(Y_{1-x-y}Pr_xCa_y)Ba_2Cu_3O_{7-x}$	$BaCO_3; CaCO_3; CuO; Pr_6O_{11}; Y_2O_3$	940	72	Y-Ba-Cu-O-*	10.1016/S0921-4534(02)02362-6
$Y_2Ba(Cu_{1-x}Ni_x)O_5$	$BaCO_3; CuO; NiO; Y_2O_3$	1300	32	Y-Ba-Cu-O-*	10.1016/S0921-5107(00)00566-3
$YBa_2Cu_{3-x}Gd_xO_{7-x}$	$BaCO_3; CuO; Gd_2O_3; Y_2O_3$	940	20	Y-Ba-Cu-O-*	10.1007/S10854-012-1022-0
$Tl_2Ba_2Ca_{1-x}Y_x(Cu_{1-y}Co_y)_2O_8$	$Ba_2Ca_{1-x}Y_x(Cu_{1-y}Co_y)O_{4+x}; CoO; CuO;$ Tl_2O_3	930	30	Y-Ba-Cu-O-*	10.1016/S0921-4534(03)00628-2
$Y_{1-x}Eu_xBa_2Cu_3O_{7-x}$	$BaCO_3; CuO; Eu_2O_3; Y_2O_3$	1015	32	Y-Ba-Cu-O-*	10.1016/S0921-4534(03)00704-4
$Y(Ba_{2-x}R_x)Cu_3O_{7-x}$	$BaCO_3; CuO; La_2O_3; Y_2O_3$	940	72	Y-Ba-Cu-O-*	10.1016/S0921-4534(03)00810-4
$Y(Ba_{2-x}R_x)Cu_3O_{7-x}$	$BaCO_3; CuO; Nd_2O_3; Y_2O_3$	940	72	Y-Ba-Cu-O-*	10.1016/S0921-4534(03)00810-4

$Y(Ba_{2-x}R_x)Cu_3O_{7-x}$	BaCO ₃ ; CuO; Pr ₆ O ₁₁ ; Y ₂ O ₃	940	72	Y-Ba-Cu-O-*	10.1016/S0921-4534(03)00810-4
$YBa_{2-x}Sm_xCu_3O_{7-x}$	BaCO ₃ ; CuO; Sm; Y ₂ O ₃	935	24	Y-Ba-Cu-O-*	10.1016/j.physc.2018.02.026
$Y_{1-y-x}Co_yCa_xBa_2Cu_3O_{7-x}$	BaCO ₃ ; CaCO ₃ ; Co ₃ O ₄ ; CuO; Y ₂ O ₃	None	None	Y-Ba-Cu-O-*	10.1016/j.physc.2018.02.029
$Y_{0.98-x}Co_{0.02}Ca_xBa_2Cu_3O_{7-x}$	BaCO ₃ ; CaCO ₃ ; Co ₃ O ₄ ; CuO; Y ₂ O ₃	950	24	Y-Ba-Cu-O-*	10.1016/j.physc.2018.02.029
$YBa_2Cu_3(OH)_x$	Ba(OC ₃ H ₇) ₂ ; Cu(CH ₃ COO) ₂ ; Y(OC ₃ H ₇) ₃	None	None	Y-Ba-Cu-O-*	10.1111/j.1551-2916.2008.02900.x
$YBa_2(Cu_{1-x}Cr_x)_4O_8$	Ba(CH ₃ COO) ₂ ; Cr(NO ₃) ₃ ·9H ₂ O; Cu(CH ₃ COO) ₂ ·H ₂ O; Y ₂ O ₃	800	50	Y-Ba-Cu-O-*	10.1016/j.chemphys.2006.12.001
$Y_3Ba_5Ca_2Cu_8O_{18}$	Ba(NO ₃) ₂ ; CaCO ₃ ; CuO; Y ₂ O ₃	900	72	Y-Ba-Cu-O-*	10.1016/j.solidstatesciences.2011.08.024
$Y_{1-x}Ca_xBaSrCu_3O_y$	BaCO ₃ ; CaCO ₃ ; CuO; SrCO ₃ ; Y ₂ O ₃	1233	24	Y-Ba-Cu-O-*	10.1016/S0921-4534(03)01167-5
$BaCe_{0.5}Zr_{0.3}Y_{0.08}Yb_{0.08}Cu_{0.04}O_{3-x}$	BaCO ₃ ; CeO ₂ ; CuO; Y ₂ O ₃ ; Yb ₂ O ₃ ; ZrO ₂	1400	3	Y-Ba-Cu-O-*	10.1016/j.ijhydene.2015.05.020
$Y_{1-x}Ca_xBa_{1.9}Nd_{0.1}Cu_3O_y$	BaCO ₃ ; CaO; CuO; Nd ₂ O ₃ ; Y ₂ O ₃	950	36	Y-Ba-Cu-O-*	10.1016/S0921-4534(03)01275-9
$Fe_{0.5}Cu_{0.5}Ba_2YCu_2O_{7+x}$	BaCO ₃ ; CuO; Fe ₂ O ₃ ; Y ₂ O ₃	930	110	Y-Ba-Cu-O-*	10.1016/S0921-4534(03)01294-2
$YBa_{2-x}La_xCu_3O_y$	BaCO ₃ ; CuO; La ₂ O ₃ ; Y ₂ O ₃	920	42	Y-Ba-Cu-O-*	10.1016/s0038-1098(00)00360-4
$Fe_xCu_{1-x}Ba_2YCu_2O_{7+y}$	BaCO ₃ ; CuO; Fe ₂ O ₃ ; Y ₂ O ₃	930	110	Y-Ba-Cu-O-*	10.1016/j.ssc.2005.03.017
$(Y_{2-x}Sm_x)Ba(Cu_{1-y}Co_y)O_5$	BaCO ₃ ; CoO; CuO; Sm ₂ O ₃ ; Y ₂ O ₃	850	32	Y-Ba-Cu-O-*	10.1016/s0955-2219(03)00179-1
$YBa_2Cu_3F_{0.4}O_x$	YBa ₂ Cu ₃ F ₄ O _x ; YBa ₂ Cu ₃ O _x	900	8	Y-Ba-Cu-O-*	10.1016/s0924-0136(99)00474-4
$YBa_2(Cu_{1-x}Ni_x)_3O_{7-x}$	BaCO ₃ ; CuO; Ni ₂ O ₃ ; Y ₂ O ₃	None	None	Y-Ba-Cu-O-*	10.1016/s0038-1098(01)00490-2