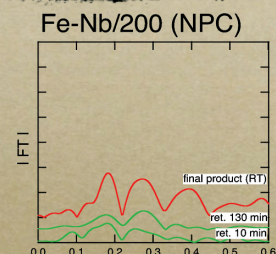
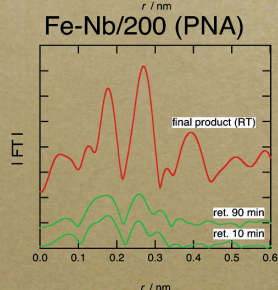


Preparation of NbN without using NH_3



	coordination	N	r / nm	R / %
ret.	Nb-N	2.3	0.226	7.0
10 min	Nb-Nb	5.0	0.311	8.6
ret.	Nb-N	2.5	0.226	3.5
130 min	Nb-Nb	5.5	0.311	2.4
final (RT)	Nb-N	2.8	0.226	4.2
	Nb-Nb	6.0	0.311	3.0



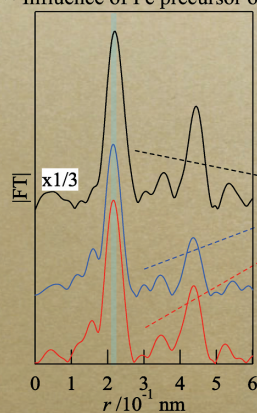
	coordination	N	r / nm	R / %
ret.	Nb-N	4.0	0.225	9.6
10 min	Nb-Nb	5.0	0.306	7.7
ret.	Nb-N	4.4	0.225	4.6
90 min	Nb-Nb	6.5	0.306	3.6
final (RT)	Nb-N	4.8	0.224	4.9
	Nb-Nb	8.9	0.311	2.0

NbCl_5 (NPC) の代わりにperoxoniobic acid (PNA)を前駆体にすることでNbの窒化が促進

Preparation of NbN without using NH_3

Fe K-edge ex situ EXAFS

~ Influence of Fe precursor on NbN formation ~



catalyst	coordination	CN	r / nm
Fe foil	Fe-Fe	8	0.248
suc-NbN (FAA)	Fe-Fe	3.9	0.248
suc-NbN (IA)	Fe-Fe	4.2	0.248

FT k range : 40-140 nm^{-1}

Fe前駆体にFAAを用いた触媒
 • Fe粒子サイズが小さい
 • Fe粒子が高分散に担持

Feの分散性
 suc-NbN (FAA) > suc-NbN (IA)

