

Chemical Modification of Niobium Layered Oxide by Tetraalkylammonium Intercalation

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Table S1. Estimated composition of hexaniobate-tma⁺ deposited solids

Sample	C (%)	H (%)	N (%)	Water (%)
tma(0.25)dep [(CH ₃) ₄ N ⁺] _{0.42} H _{1.58} K ₂ Nb ₆ O ₁₇ ·2.4H ₂ O	2.05 (1.94) ^a	1.16 (1.10)	0.60 (0.48)	4.40 (4.44)
tma(0.50)dep [(CH ₃) ₄ N ⁺] _{0.95} H _{1.05} K ₂ Nb ₆ O ₁₇ ·3H ₂ O	4.41 (4.43)	1.79 (1.80)	1.29 (1.15)	5.23 (5.38)
tma(0.75)dep [(CH ₃) ₄ N ⁺] _{1.05} H _{0.95} K ₂ Nb ₆ O ₁₇ ·3H ₂ O	4.85 (4.83)	1.88 (1.93)	1.41 (1.24)	5.19 (5.33)
tma(1.0)dep [(CH ₃) ₄ N ⁺] _{1.05} H _{0.95} K ₂ Nb ₆ O ₁₇ ·2.8H ₂ O	4.86 (4.90)	1.85 (1.90)	1.42 (1.16)	4.86 (4.91)

^a) experimental data.

Table S2. Estimated composition of hexaniobate-tea⁺ deposited solids

Sample	C (%)	H (%)	N (%)	Water (%)
tea(0.25)dep [(CH ₃ CH ₂) ₄ N ⁺] _{0.48} H _{1.52} K ₂ Nb ₆ O ₁₇ ·2.8H ₂ O	4.51 (4.69) ^a	1.65 (1.38)	0.66 (0.71)	4.94 (4.95)
tea(0.50)dep [(CH ₃ CH ₂) ₄ N ⁺] _{0.62} H _{1.38} K ₂ Nb ₆ O ₁₇ ·3.7H ₂ O	5.63 (5.39)	2.02 (1.59)	0.82 (0.71)	6.3 (6.2)
tea(0.75)dep [(CH ₃ CH ₂) ₄ N ⁺] _{0.56} H _{1.44} K ₂ Nb ₆ O ₁₇ ·3.2H ₂ O	5.18 (5.30)	1.85 (1.41)	0.75 (0.91)	5.55 (5.46)
tea(1.0)dep [(CH ₃ CH ₂) ₄ N ⁺] _{0.56} H _{1.44} K ₂ Nb ₆ O ₁₇ ·3.2H ₂ O	5.18 (5.24)	1.85 (1.37)	0.75 (0.72)	5.54 (5.49)

^a) experimental data.

Table S3. Estimated composition of hexaniobate-tpa⁺ deposited solids

Sample	C (%)	H (%)	N (%)	Water (%)
tpa(0.25)dep [(CH ₃ CH ₂ CH ₂) ₄ N ⁺] _{0.09} H _{1.91} K ₂ Nb ₆ O ₁₇ ·1.6H ₂ O	1.36 (1.39) ^a	0.80 (0.56)	0.13 (0.03)	3.00 (3.27)
tpa(0.50)dep [(CH ₃ CH ₂ CH ₂) ₄ N ⁺] _{0.25} H _{1.75} K ₂ Nb ₆ O ₁₇ ·1.6H ₂ O	3.66 (3.68)	1.21 (1.11)	0.36 (0.28)	2.92 (2.94)
tpa(0.75)dep [(CH ₃ CH ₂ CH ₂) ₄ N ⁺] _{0.29} H _{1.71} K ₂ Nb ₆ O ₁₇ ·1.5H ₂ O	4.22 (4.28)	1.30 (1.16)	0.41 (0.40)	2.73 (2.78)
tpa(1.0)dep [(CH ₃ CH ₂ CH ₂) ₄ N ⁺] _{0.31} H _{1.69} K ₂ Nb ₆ O ₁₇ ·1.6H ₂ O	4.48 (4.54)	1.36 (1.27)	0.44 (0.49)	2.89 (3.00)

^a) experimental data.

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