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W. Zhao, H.P. Zhou, Y.K. Yan and D. Liu	
Piezoelectric and Dielectric Properties of (Bi_{0.5}Na_{0.5})_{0.94}(Ba_{1-x}Sr_x)_{0.06}TiO₃ Lead-Free Piezoelectric Ceramics	1911
Z.W. Chen, Z.Y. Lu and J.Q. Hu	
Piezoelectric and Dielectric Properties of Bi₂O₃-Doped (Bi_{0.5}Na_{0.5})_{0.94}Ba_{0.06}TiO₃ Lead-Free Piezoelectric Ceramics	1915
J.Q. Hu and Z.W. Chen	
Grain Growth and Electric Properties of Lead-Free BaTiO₃ Ceramics	1919
C.H. Wang	