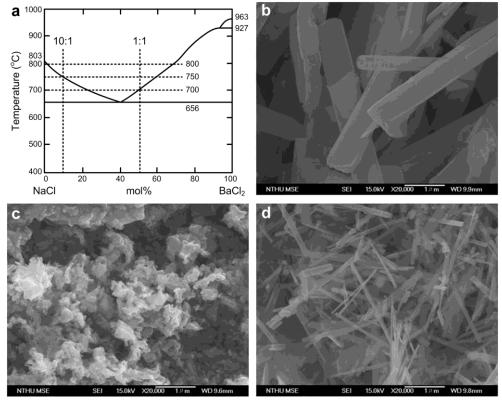
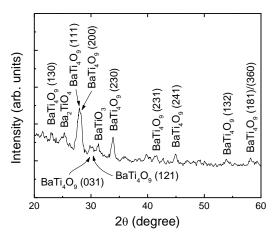


Supporting Information 1 SEM images of one-step molten-salt synthesized $BaTi_4O_9$ nanowires prepared with an NaCl-to-BaCl₂ ratio of 10:1 in different conditions: 750°C for (a) two and (b) six hours, and (c) 800 and (d) 900°C for two hours.



Supporting Information 2 (a) NaCl-BaCl₂ phase diagram;²⁵ (b) SEM image of one-step molten-salt synthesized BaTi₄O₉ nanowires prepared with an NaCl-to-BaCl₂ ratio of 1:1 at 800°C for two hours; SEM images of two-step synthesized products prepared at (c) 750 and (d) 800°C for two hours.



Supporting Information 3 XRD pattern of one-step molten-salt synthesized $BaTi_4O_9$ nanowires prepared with an NaCl-to-BaCl₂ ratio of 10:1 at 750°C for four hours.