

## Supporting information

### **Uniaxial tension-induced fracture in gold nanowires with the dependence of sizes and atomic vacancies**

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## Supplementary Multimedia Captions

**Video S1** A movie of deformation behavior of the [100] single-crystal gold nanowire at the size I of  $(3a \times 3a \times 9a)$ , (Video S1.avi).

**Video S2** A movie of deformation behavior of the [100] single-crystal gold nanowire at the size II of  $(9a \times 9a \times 27a)$ , (Video S2.avi)

**Video S3** A movie of deformation behavior of the [100] single-crystal gold nanowire with the vacancy ratio of 4% at the size I of  $(3a \times 3a \times 9a)$ , (Video S3.avi)

**Video S4** A movie of deformation behavior of the [100] single-crystal gold nanowire with the vacancy ratio of 35% at the size I of  $(3a \times 3a \times 9a)$ , (Video S4.avi)

**Video S5** A movie of deformation behavior of the [100] single-crystal gold nanowire with the vacancy ratio of 0.6% at the size II of  $(9a \times 9a \times 27a)$ , (Video S5.avi)

**Video S6** A movie of deformation behavior of the [100] single-crystal gold nanowire with the vacancy ratio of 30% at the size II of  $(9a \times 9a \times 27a)$ , (Video S6.avi)