Synthesis of large single crystals and physical property measurements

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Single crystals of forsterite and Fe bearing olivine were grown by the Czochralski-pulling method. We determined elastic wave velocities in the grown single crystals by ultrasonic pulse transmission technique at ambient conditions in the three orthogonal structural directions. We also determined elastic wave velocities in granite in the range of room temperature to 650 degree and room pressure to 0.5GPa.