

Hot-Walled PLD를 이용한 ZnO 나노와이어의 도핑 제어

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Doping Control in ZnO Nanowires Employing Hot-Walled Pulsed Laser Deposition

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Abstract : We design and demonstrate the controlled doping into ZnO nanowires (NWs) adopting self-contrived hot-walled pulsed laser deposition (HW-PLD). Optimized synthesis conditions with the diversified dopants guarantee the excellent crystallinity and morphology as well as electrical properties of the NWs. Proprietary target rotating system in the HW-PLD fuels the controlled formation and doping of the NWs. Prepared NWs sensitive to the environment are systematically characterized, and the doping mechanism is discussed.

Key Words : ZnO, nanowire, doping, HW-PLD