Substitusi Ni pada Senyawa La0,67Ba0,33Mn1-xNixO3 (x = 0; 0,01; 0,02; 0,03; 0,04; dan 0,05) dan Pengaruhnya Terhadap Sifat Resistansi di Bawah Pengaruh Medan Magnet = Ni-substitution to La0,67Ba0,33Mn1-xNixO3 Compounds (x = 0; 0,01; 0,02; 0,03; 0,04; and 0,05) and Its Effect to Resistance Under Magnetic Fields / Romadhon Nuzuly

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Abstrak

[Telah dilakukan substitusi Ni pada senyawa perovskite La0,67Ba0,33Mn1-xNixO3 with x = 0; 0,01; 0,02; 0,03; 0,04; and 0,05 dan dikarakterisasi dengan difraksi sinar x, permagraf, dan four point probe (FPP). Semua sampel menunjukkan struktur kristal orthorombik pada suhu ruangan. Parameter kisi a, b, c cenderung konstan seiring
bertambahnya Ni pada Mn. Magnetisasi saturasi untuk semua sampel belum dapat ditentukan yang dikarenakan hasil pengukuran permagraf belum terbentuk kurva histeresis. Selain itu, nilai magnetisasi remanen untuk semua sampel bernilai nol atau tidak ada. Magnetoresistansi negatif terjadi pada x = 0 dengan rasio 15,625% dan magnetoresistansi positif terjadi pada x = 0,01 sampai dengan 0,05 dengan persentase maksimum 18,341% untuk x = 0,01.;Ni-substituted to perovskites La0,67Ba0,33Mn1-xNixO3 with x = 0; 0.01; 0.02; 0.03; 0.04; and 0.05, have been done and investigated by x-ray diffraction, permagraph,
and four point probe (FPP) measurements. All samples show an orthorhombic structure in room temperature. The cell parameter a, b, c tent to consist with increasing Ni content. Magnetization saturation for all samples can not be measure, because the hysteresis loop is not form. On the other side, magnetic remanence is zore for all samples. Negative magnetoresistance appears at x = 0 with ratio 15.625% and positive magnetoresistance appears at x = 0.01 untill 0.05 with
maximum ratio 18.341% for x = 0.01., Ni-substituted to perovskites La0,67Ba0,33Mn1-xNixO3 with x = 0; 0.01; 0.02; 0.03;
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