Two important mechanisms in preparation of ultrathin films of magnetic oxides were systematically investigated in this work. First, influence of epitaxial strain on resulting magneto-optical properties of $La_{2/3}Sr_{1/3}MnO_3$ (LSMO) ultrathin films was studied. The investigated films were grown by pulsed laser deposition on four different substrates, providing a broad range of induced epitaxial strains. Magnetic properties were found to deteriorate with increasing value of the epitaxial strain, as expected due to the unit cell distortion increasingly deviating from the bulk and effect of the magnetically inert layer. A combination of spectroscopic ellipsometry and magneto-optical Kerr effect spectroscopy was used to determine spectra of the diagonal and off-diagonal elements of permittivity tensor. The off-diagonal elements confirmed presence of two previously reported electronic transitions in spectra of all films. Moreover, they revealed another electronic transition around 4.3 eV only in spectra of films grown under compressive strain. We proposed classification of this transition as crystal field paramagnetic Mn $t_{2g} \rightarrow e_g$ transition, which was further supported by *ab initio* calculations. A key role of strain in controlling electronic structure of ultrathin perovskite films was demonstrated. Dynamic application of strain via use of piezoelectric underlayer remained inconclusive, requiring further improvement of the strain transfer from the piezoelectric layer into the LSMO. Second, influence of substrate miscut on magnetization dynamics in $SrRuO_3$ (SRO) was studied. As expected we found that high miscut angle leads to suppression of multi-variant growth. By means of magnetic force microscopy we showed that presence of multiple SRO variants leads to higher density of defects acting as pinning or nucleation sites for the magnetic domains, which consequently results in deterioration of magnetic properties. We demonstrated that use of vicinal substrate with high miscut angle is important for fabrication of high quality SRO ultrathin films with low density of crystallographic defects and excellent magnetic properties.