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Supporting Information

Nickel oxide interlayer films from nickel formate-ethylenediamine precursor: Influence of annealing on thin film properties and photovoltaic device performance

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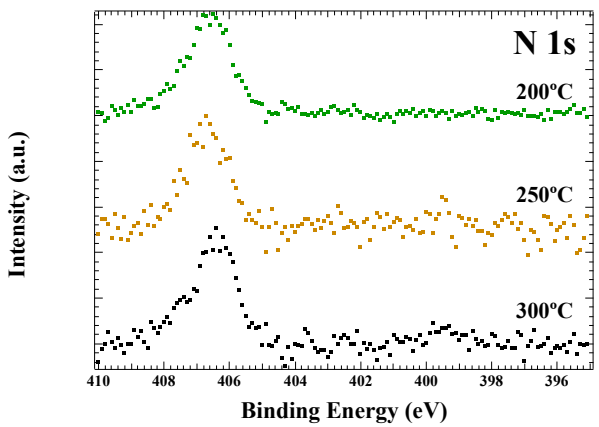
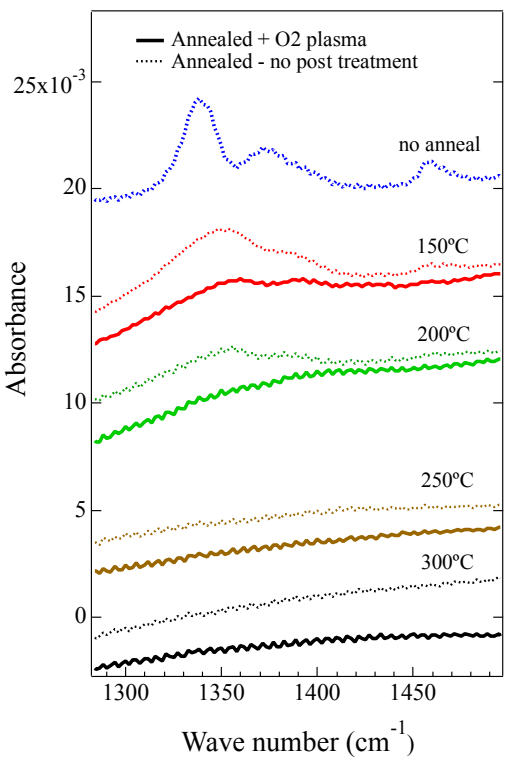
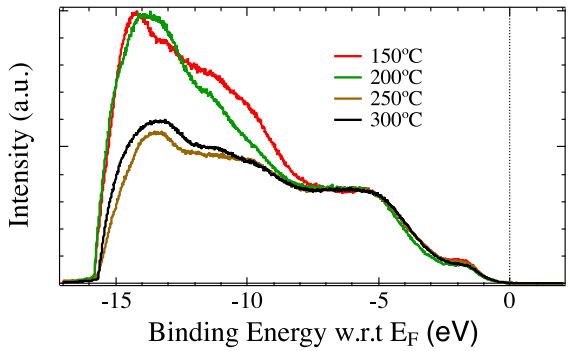
Supporting Information



S1: N 1s spectra for 200ºC, 250ºC and 300ºC anneals showing the presence and high binding energy of N 1s photoelectrons. Spectra have been normalized.



S2: FTIR of NiOx films that were annealed at temperatures shown with and without O_2-plasma post-treatment. The main peak in the no anneal film is due to the symmetric stretch mode, ν_s(COO) from nickel formate. Note the shift to higher wavenumbers as the films are annealed and O_2-plasma treated.



S3: UPS of spin-cast (NiO_x) thin films on ITO after annealing at the temperatures shown. All films received O_2-plasma treatment after annealing. Spectra are normalized to the O 2p photoemission features near -5.5 eV. Features between -7 eV and -14 eV may arise from N in the lower temperature (150°C and 200°C) annealed samples.

Notes and references

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