Supporting Information

Nanostructure of Surface Films on Ni18P Alloy in Sulfate Solutions by the Maximum Entropy Method.

 $Mariano\ Andrea\ Scorciapino^{\dagger,l},\ Marzia\ Fantauzzi^{\dagger,l},\ Maura\ Crobu^{\dagger,2},\ Gabriele\ Navarra^{\dagger},\ Bernhard\ Elsener^{\dagger},$ $Antonella\ Rossi^{\dagger*}$

Supplementary Data

Figure S1	IMFP values of electrons
Figure S2	High resolution Ni 2p _{3/2} XPS spectrum
Figure S3	High resolution P2p XPS spectrum
Figure S4	High-resolution spectrum of O1s of the mechanically polished NiP alloy
Figure S5	Comparison of O1s spectra of the NiP alloys acquired after polarization at +0.1 V SCE in 0.1M Na ₂ SO ₄ solution for 1, 3 and 16 hours
Figure S6	High-resolution spectrum of C1s

[†]Department of Chemical and Geological Sciences, University of Cagliari, Cittadella Universitaria di Monserrato, S.P. 8 km 0.700, I-09042, Monserrato (CA), Italy

^{*} Corresponding author: e-mail: rossi@unica.it; phone: +39-070-675-4464; fax: +39-070-675-4456

¹ Present address: Department of Biomedical Sciences, Biochemistry Unit, University of Cagliari, Cittadella Universitaria di Monserrato, S.P. 8 km 0.700, I-09042, Monserrato (CA), Italy

² Present address: Mettler-Toledo GmbH, Process Analytics, Im Hackacker 15, CH-8902 Urdorf

Figure S1: IMFP values of electrons travelling through i) mixed carbon-oxigen material, ii) nickel orthophosphate, iii) red phosphorus and iv) Ni18P alloy, determined with G-1 predictive equation in the 200-2000 eV kinetic energy range.

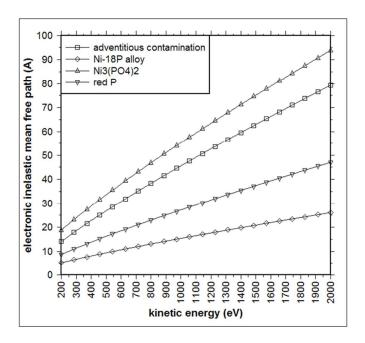


Figure S2: High-resolution spectrum of Ni2p_{3/2}. Acquisition mode: standard lens mode

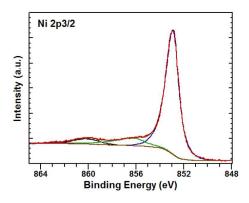
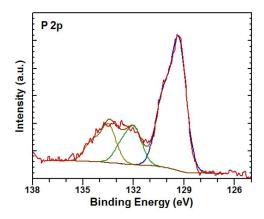
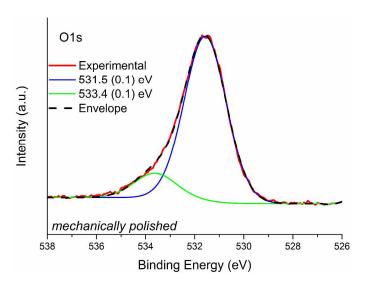


Figure S3: High-resolution spectrum of P2p. Acquisition mode: standard lens mode



<u>Figure S4:</u> High-resolution spectrum of O1s of the mechanically polished NiP alloy. Acquisition mode: standard lens mode



<u>Figure S5:</u> Comparison of O1s spectra of the NiP alloys acquired after polarization at +0.1 V SCE in 0.1M Na₂SO₄ solution for 1, 3 and 16 hours. Acquisition mode: standard lens mode

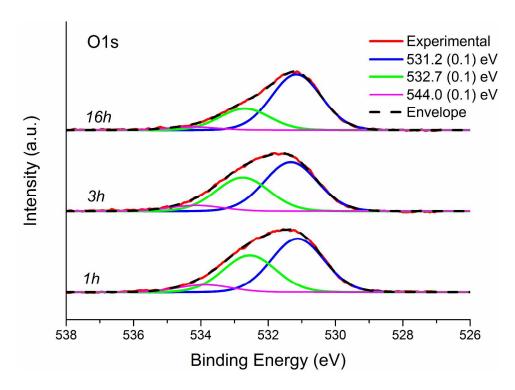


Figure S6: High-resolution spectrum of C1s. Acquisition mode: standard lens mode

