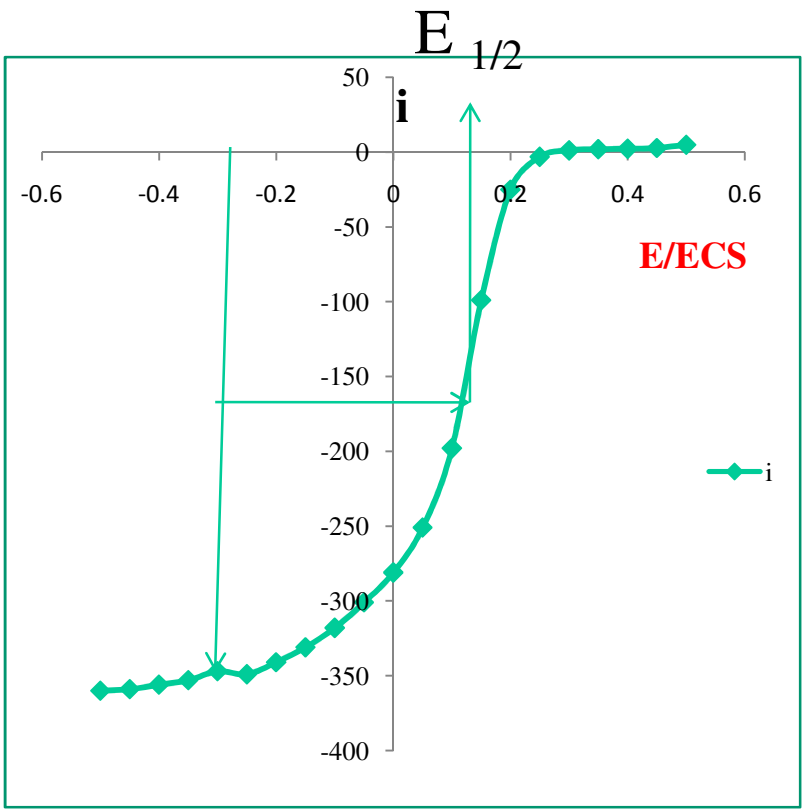
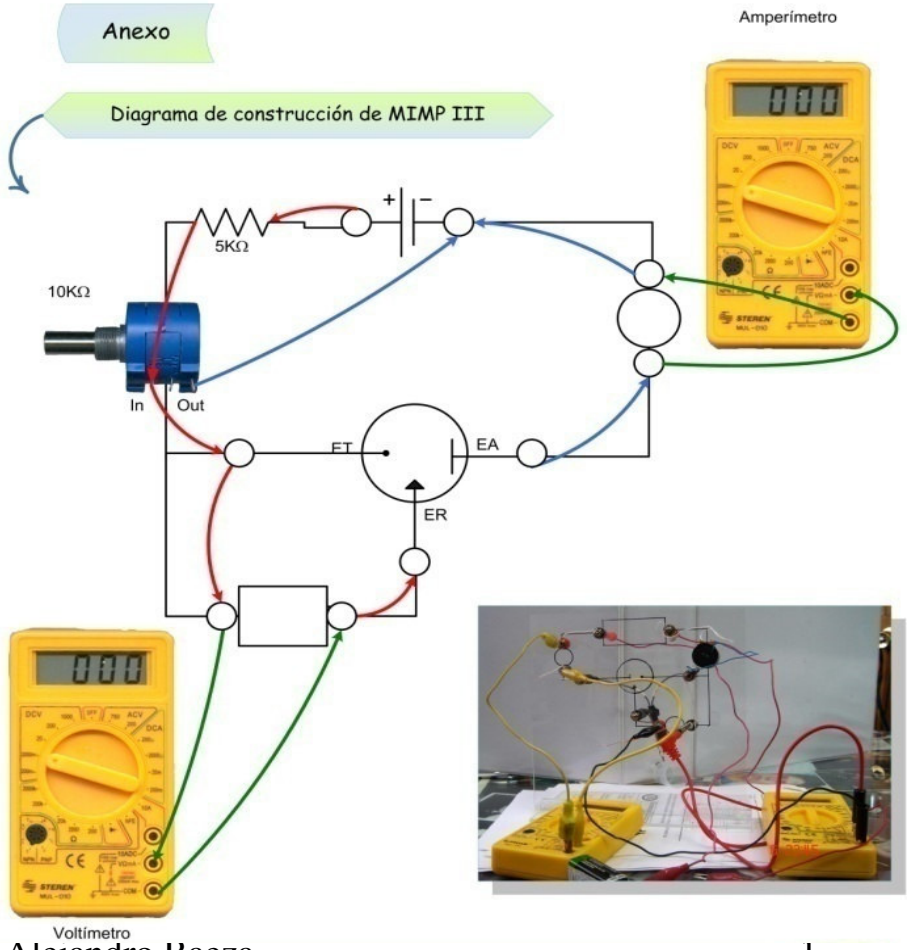
Voltamperograma a tiempo de muestreo $\tau = 30s$
con micropolarógrafo de mínima instrumentación y microelectrodos
con ET = C; EA = C, y ER=ECS
Hexacianoferrato (III) Co = 0.01 mol/L





La relación de los datos de E impuesto y corriente medida.

Ecuación general:

Si η=0

$$E = E° + \frac{0.06}{n} \log \frac{[Ox]_{el}}{[\mathrm{Re}\, d]_{el}}$$

$$i = nK_{red}\left[C_{red} - [\mathrm{Re}\, d]_{el}\right]$$

$$i_{red} = nK_{red}C_{red}$$

$$i = -nK_{ox}\left[C_{ox} - [Ox]_{el}\right]$$

$$i_{ox} = -nK_{ox}C_{ox}$$

$$E = E° + \frac{0.06}{n} \log \frac{i - i_{ox}}{i_{red} - i} + \frac{0.06}{n} \log \frac{K_{red}}{K_{ox}}$$

$$E = E° + \frac{0.06}{n} \log \frac{i - i_{ox}}{i_{red} - i} + \frac{0.06}{n} \log \frac{K_{red}}{K_{ox}}$$

ecuación para una solución que contiene solo oxidante Fe(III):

$$E = E° + \frac{0.06}{n} \log \frac{i_{ox} - i}{i}$$

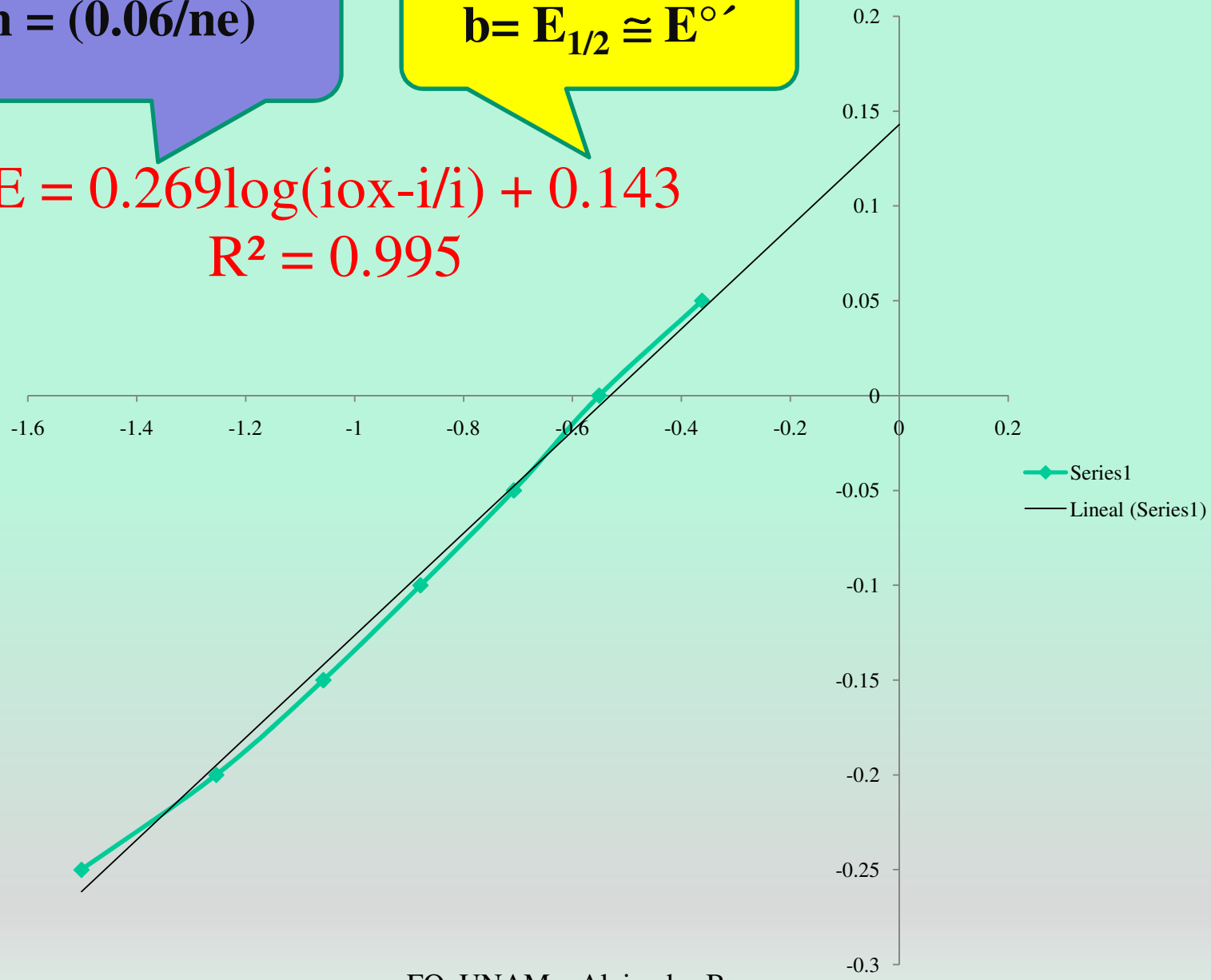
$$E = E_{1/2} + \frac{0.06}{n} \log \frac{i_{ox} - i}{i}$$

m = (0.06/ne)

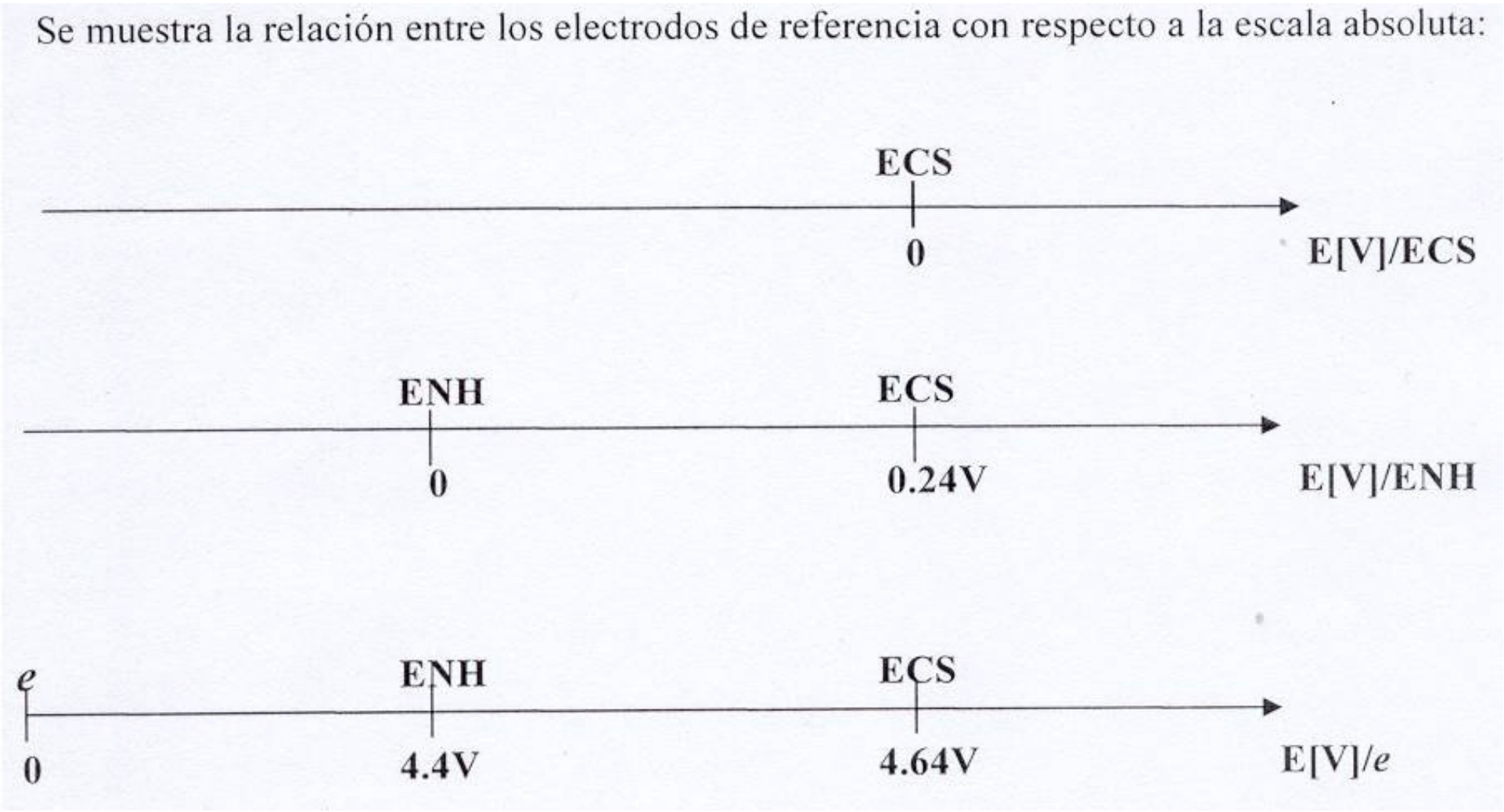
b= $E_{1/2} \cong E^{\circ\prime}$

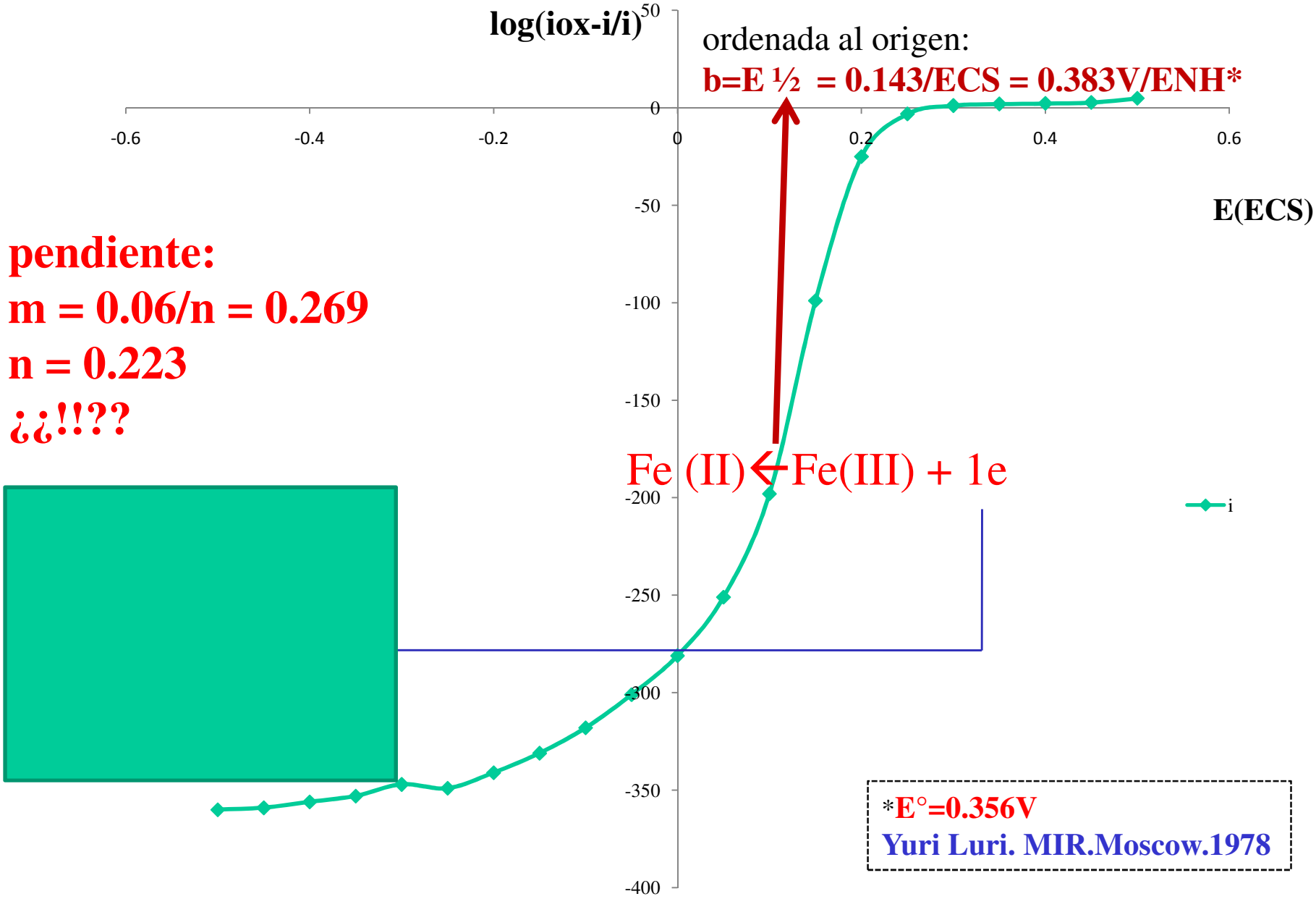
$E = 0.269\log(iox-i/i) + 0.143$

$R^2 = 0.995$



Se muestra la relación entre los electrodos de referencia con respecto a la escala absoluta:




log(iox-i/i)
ordenada al origen:
b=E ½ = 0.143/ECS = 0.383V/ENH*
E(ECS)
pendiente:
m = 0.06/n = 0.269
n = 0.223
¿¿!!??
Fe (II) ← Fe(III) + 1e
i
*E°=0.356V
Yuri Luri. MIR.Moscow.1978

$$E = E^{o} + \frac{0.06}{n} \log \frac{i_{ox} - i}{i}$$

$$E = E_{1/2} + \frac{0.06}{n} \log \frac{i_{ox} - i}{i}$$

Ecuación con parámetro cinético:

$$E = E_{1/2} + \frac{0.06}{\alpha n} \log \frac{i_{ox} - i}{i}$$