Sensors **2004**, *4*, 14-15

sensors
ISSN 1424-8220

http://www.mdpi.net/sensors

Comments on "E. Pungor, The New Theory of Ion Selective Electrodes. *Sensors* 2001, *1*, 1-12"

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Received: 15 March 2004 / Accepted: 23 March 2004 / Published: 30 March 2004

The techniques and information described in this paper [1] are nothing new. For instance, memory effect, x-ray photoelectron spectroscopy, no ion penetration from the membrane surface to the inside membrane, the K^+ adsorption at the valinomycin, etc. are well known [2]. In particular, the author did not cite many references for the information. For instance, the K^+ and membrane graph (Fig. 1) was already reported in the literature, the author just copied it without citation or having permission from the publisher (Ref. 3, Fig. 3a). Without references, it gives the readers an impression that the information came from the author's original work. This violates the international code of ethics conduct.

The importance of the "new theory" and "how is the electrode potential produced" is emphasized in the paper [1]. However, the author only stated in about 10 lines at the end of paper to conclude with a *Gibbs–Duham* thermodynamic equation, $-\Delta G = nFE$. He stated the ion adsorption and avoided its basis as being the capacitor theory. His simple statement indicated that an electrode potential is caused by charge separation at the surface of the electrode and that the interpretation is connected with the chemisorption of ion from the solution without any detailed discussions and logic supports. Obviously, he tried on purpose to avoid the key word **capacitor** because we proposed the capacitor theory**.** Not only is the ion adsorption by the electrode surface well known [2], the thermodynamics has nothing to do with the mechanism. Ion adsorption and charge density are closely associated with a capacitor. The mechanism should be emphasized in any new theory. The author has been unfamiliar with the difference between thermodynamics and mechanism; he mixed them up in his previous paper [4]. The new theory or mechanism in this paper is just a replica of the one reported before [4]. One should read my paper to understand the difference between thermodynamics and mechanism and their applications in ion selective electrode potential development [5]. We may have the same ΔG but different mechanisms. A scientific paper should be carefully prepared to benefit the readers, not playing magic tricks to mislead them. I have recently emphasized the importance of an author's careful attitude in writing chemical publications [6].

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