Letter to the Editor: “The Promise of Silicon”

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Received: 8 March 2011 / Accepted: 10 March 2011 / Published online: 30 March 2011
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Dear Dr. Clarson,

I could not resist writing a couple of words about the work “The Promise of Silicon” recently published in *Silicon* (*Silicon* 2010 2:197–200). Dr. Zank took a step forward in clarifying the position and the future of Si in our technology dependent society. The future growth of the human population and the quality of our life heavily depends on a better understanding and exploiting of element number 14 as Zank referred to Si.

However, researchers devoted to Si projects have a great deal of problems in order to compete with emerging materials and consequently secure enough funds for Si projects. Mostly, the reason for such a situation is an aggressive approach and commercialization of the ideas related to new materials. However, just because something sounds “cool” does not necessarily mean that it is better. We researchers and practical engineers working with Si are taking its advantages for granted. Instead we should put more effort into educating non experts and experts in other fields about the advantages, benefits and potential that Si gives to our society. In most cases, funds and resources invested in Si research can bring greater value than for any other material. There is always a

challenge to persuade the non expert that the ordinary and widely present Si has greater potential and economical and environmental value than many of the proposed emerging materials. But each of us in our respected fields should try to clarify with facts and numbers the advantages of Si in comparison to other materials. For example, looking into the over presented photo-catalytic conversion efficiency charts for various materials, one can presume that some materials are superior to Si. However, there is not a known material with relatively high conversion efficiency, imperviousness to atmospheric conditions and excellent mechanical properties that provides a combination of easy installation and decades of service. Furthermore, many new photo-catalytic materials rely on the Si solar cells network and are intended only as an accompaniment to existing Si solar cells.

Hopefully, in the near future, more reports like Dr. Zank’s will be available which will make it abundantly known that Si is not a material of the past but also a key element of our future.

Respectfully,
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