To the Editor:

In the article by Marquand (J. CHEM. EDUC., **34,** 532 (1957)) the terms adsorption-absorption and adsorbent-absorbent are used interchangeably.

The term "adsorption" should refer to a surface phenomenon in which molecules of one substance become concentrated at the surface of another material. The term "absorption" should refer to a bulk phenomenon in which one material is not only retained on the surface but is also distributed throughout the body of the second material.

In reviewing the article by Marquand it appears to this reader that the poisonous gases mentioned were removed from the air by a process of adsorption and the agents used to remove the gases were therefore adsorbents. However, in any case, whether the process is adsorption or absorption, the writer should be consistent in his terminology.

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To the Editor:

The strong beliefs of the reviewer quoted in Editor's Outlook (November, 1957) have led him to take an extreme position, with unjustified implications. "...men go into physical sciences as a result of natural abilities which have been given identification and encouragement...."

I do not believe that the doctrine of inherited ability in specific fields can be supported. Mental ability is basic, then circumstances lead in one direction or another. Often the choice is difficult. In such cases the economic facts of life can tip the scale—and justifiably. For to most people a low salary scale does not mean that the work is so attractive that the many applicants depress the wage scale; it is taken to mean that society does not consider the job to be very important, and that there is something queer about people who will accept low pay and the low status associated with it.

Before I advise a border-line case or a versatile genius to become a chemist (or a teacher), I want to feel reasonably sure that he will be appreciated, and paid accordingly.

The moral of all this is that the social climate of our country needs to be changed so that we appreciate and value intellectual attainments in general—not just in science and mathematics, and particularly not just in the field of satellites and missiles. That will be a major change; I hope it can be achieved without any more catastrophic stimulus than losing a sputnik race.

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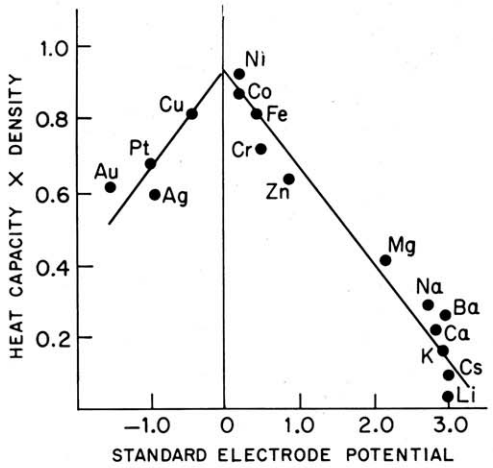
To the Editor:

It has been found that the product of the specific heat (at 0°C.) and the density (at 20°C.) of a metal appears to have some relationship to the position of that metal on the electromotive force series. (See accompanying figure.)

$$\text{sp. ht. (cal./g.)} \times \text{density (g./cc.)} = f\,(\text{e.m.f.})$$

The quantity on the left has the dimensions of cal./cc. The factors which influence the magnitude of the electrode potential of a metal are: the energies absorbed in



sublimation and ionization and the energy released by hydration of the ions. Of these it appears that the only one which can involve the volume, as implied by the dimension (cal./cc.) is the sublimation energy of the metal. Can your readers suggest what this relationship may be?

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To the Editor:

For some time the author has felt the need for a word which would parallel the word molecule but be applicable to ionic species Though we stress the fact that no molecules exist in an ionic crystalline substance such as NaCl, and substitute the terms: "gram formula weight" or G.F.W., and formality for gram molecular weight or mole and molarity, we have no word to describe the hypothetical ionic analogue of the molecule.

Even in the course of denying the existence of this entity, I am embarrassed as a teacher since I must flounder in describing it. There are applications, however, in which such a concept does have considerable