configurational chemical isomerism, then the hitherto unknown isomers, which Prof. Noller points out may be expected if α,β-dibromo,-α,β-diiodosuccinic acid is synthesized, should be recognized as chemical individuals in their own right, since their molecular volumes, dipole moments, and reactivities of functional substituents will be different.

There will indeed be two possible meso-forms, but both of them will be optically inactive. Likewise, three chemically different isomers, because of restricted rotations, may be predicted for the d,l modification, but the optical rotation will be identical for all three.

When such isomers are isolated, it will be wise for stereochemists, in order to avoid confusion, to designate them by some other nomenclature than the already-specific terms ''geometric isomer'' or ''diastereoisomer.'' Perhaps the term ''restriction isomer'' would be applicable.

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Relation Between the Diamagnetic Susceptibilities of Ions in Solution and in the Crystalline State

The diamagnetic susceptibilities of ions both in solution, X_s, and in crystalline state, X_c, were determined by G. W. Brindley and F. E. Hoare (*Trans. Faraday Soc.*, 1937, 33, 268). Their data were considered as very reliable by V. C. G. Trew (*Trans. Faraday Soc.*, 1941, **37**, 476). Recently I have found a simple relation existing between the values of X_s and X_c which can be expressed as follows:

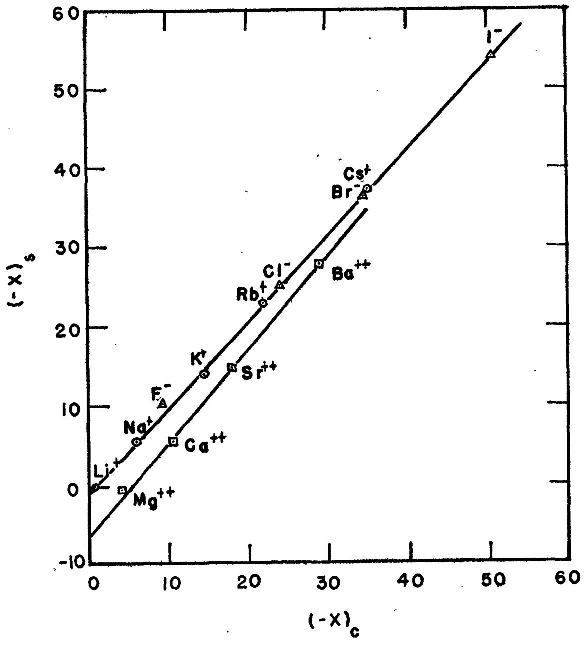

Fig. 1

$$(-X)_s = a_1(-X)_c - b_1$$

where $a_1 = 1.09$ and $b_1 = 1.0$ for alkali and helide ions and 1.15 and 5.8, respectively, for alkaline earth ions with the exception of beryllium. The ionic susceptibilities are expressed in 10^6 c.g.s. units/gram-ion. The average deviation of calculated X_s from observed X_s is ± 0.3 for univalent ions and ± 0.4 for divalent ions. The relation is shown in Fig. 1.

The equation of ionic susceptibility is found to be similar to an equation of ionic volume (*J. Chin. chem. Soc.*, 1942, 9, 46): $V_s = a_2V_c - b_2$, where V_s is the apparent volume of an ion in an infinitely dilute solution and V_c is the crystalline state as calculated from Pauling's ionic radius. Interpretation of the first equation with its bearings upon the nature of ionic solution will appear in the *Journal of the Chinese Chemical Society* (Vol. 12, No. 2).

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A Comment on Discoveries in the Vitamin A Field

Some time ago (*Science*, 1945, **101**, 183) I published a note on the use of Super-Filtrol as a new reagent for Vitamin A. Subsequently I was taken to task by several workers who pointed out that the blue color formed by Vitamin A on acid earths of various types had been previously discovered. This has now assumed the character of a race to see who can find the earliest discoverer of the phenomenon. Currently in first place is E. Lester Smith (*Science*, 1946, **103**, 281), who dates the discovery in 1923 by Takahashi and Kawakami. Other contenders over the past year have been Meunier, Emmerie and Engle, and Kobayashi and Yamamoto (see *Science*, 1946, **103**, 175, for references).

As the unintentional starter in this race, I cannot help but find it amusing that three out of the four authors who have championed prior investigators were just as ignorant of the work to which Dr. Smith refers as was I, the one toward whom their comments were directed.

I had not intended to rise in rebuttal in this matter, but noting that Dr. Hickman has replied to Dr. Smith's comment on his work, I feel encouraged to speak myself. Permission to publish the work I reported had been withheld until two years after the work had been done. By that time, I was working elsewhere, and in another field, and had no time to go into an extensive literature search. I did not feel that any harm or discourtesy would be done to possible prior workers inasmuch as I made no claims for discovering the general phenomenon. My paper was entitled ''A new reagent for vitamin A'' and was merely intended to report that I had adapted a specific acid earth to a field assay for the vitamin. I felt this to be a useful contribution which might prove of value to others in the field. I have been pleased to have this verified by the rather surprising number of requests for reprints which I have received.

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