hypothesis, without bringing any compensatory advantages. As a matter of fact, the whole chemical and physical behavior of proteins and other biochemical substances would suggest a Van der Waals' binding, which does not have extended electron states, rather than the electron band binding typical of salt or the diamond. There are other mechanisms already well known to which appeal may be made.

It is well known that neutral or excited atoms, molecules or free radicals may be adsorbed on solid or liquid surfaces as a mobile two-dimensional gas. Such excited mobile entities constitute a second possible mechanism for the effects which Professor Szent-Györgyi discusses. Others are known, and it would be a daring biologist who would suggest that there are no more undiscovered mechanisms.

To summarize, this note suggests that Professor Szent-Györgyi's hypothesis may be of greater use to biology if it is left in its simplest and most general form, "There exists *a* mechanism which permits the energy of absorbed light or chemical reaction provided in one portion of a living system to be available, without degradation or dispersion, for chemical reactions in relatively distant portions of the system," without tying to any particular mechanism or even to any known mechanism, until much more information is available.

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ONE SOURCE OF CLAY BALLS

THE Smoky Hill River has a variable flow like all the streams of Western Kansas. Commonly it occupies only part of its channel. During high water and its recession much mud is plastered on the banks and bars. During the succeeding low-water stages mud cracks develop in this layer, often penetrating to considerable depth. As the mud dries further the layers become separated. The oblong, flattened chunks of dried mud which result from the cracking and separation of layers are later washed or otherwise tumbled into the stream.

The mud, having been water-laid in that fashion, is of finely divided clay particles, giving a uniform clay which is quite plastic when wet. I have molded bits of this mud and fired them. The chunks which fall into the stream cohere during transport and are rounded by rolling along the stream bed. Some of them are shunted out of the current and come to rest among the pebbles and sand on the shoals and bars, where they may be further rolled, accumulating an armor of sand and pebbles, or they may be buried among the other sediments in the stream bed.

All stages of this process have been observed. My interest was first aroused by finding some isolated clay masses in the sand on the bank of the stream south of Gorham, Kansas. Knowing that the available clays along the course of the stream west of this point are quite limy, I looked for a source of more plastic clay such as in these masses. The stages of development were found just east of Highway U. S. 183 near Schoenchen, Kansas.

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A FLORIDA WHITE BLACKBERRY

THE author recently discovered a large wild colony of a white-fruited blackberry near Gainesville, Florida, and has named it *Rubus cuneifolius* Pursh, forma *albifructus*. The plants closely resemble those of the species and the fruits differ chiefly in lacking the black color. Experiments will be undertaken to determine the origin of this form and to improve it, if possible, for local use. The white blackberries at present offered for sale are not suited to the Florida climate.

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AN ANALYSIS OF THE MAJOR INTERESTS OF THE MEMBERS OF THE BOTANICAL SOCIETY OF AMERICA

THE recently published Year Book (1940–41) of the Botanical Society of America[1] includes a list of members with their addresses and major fields of interest. A study was made of the latter to determine the distribution of interests among the various botanical subsciences. Table 1 presents the results of this analysis. It will be noted that approximately one half of the total "interests," *i.e.*, 948, lie in the morphological sciences. The low percentages of women interested in the fields of plant pathology (6 per cent.), plant geography (3 per cent.), economic botany (6 per cent.) and phylogeny (0 per cent.) are noteworthy.

It should be emphasized that the figures in the table do not indicate numbers of individuals in the various divisions of plant science, for many of the botanists listed in the Year Book have given several fields of interest. Therefore, this table is a summary of *interests*, not *individuals*. Accordingly, the fact that the total number of "interests" listed in the table is 1,829, whereas there are but 1,365 members in the society, should occasion no surprise. It should also be pointed out that this table gives but a partial picture of the "interests" of American botanists, for many plant scientists are not members of this society but may be affiliated with various special organizations, such as

[1] Miscellaneous Series, Publication 124, January, 1941, Office of the Secretary, New Haven, Conn.