KONINKLIJKE NEDERLANDSE
AKADEMIE VAN WETENSCHAPPEN

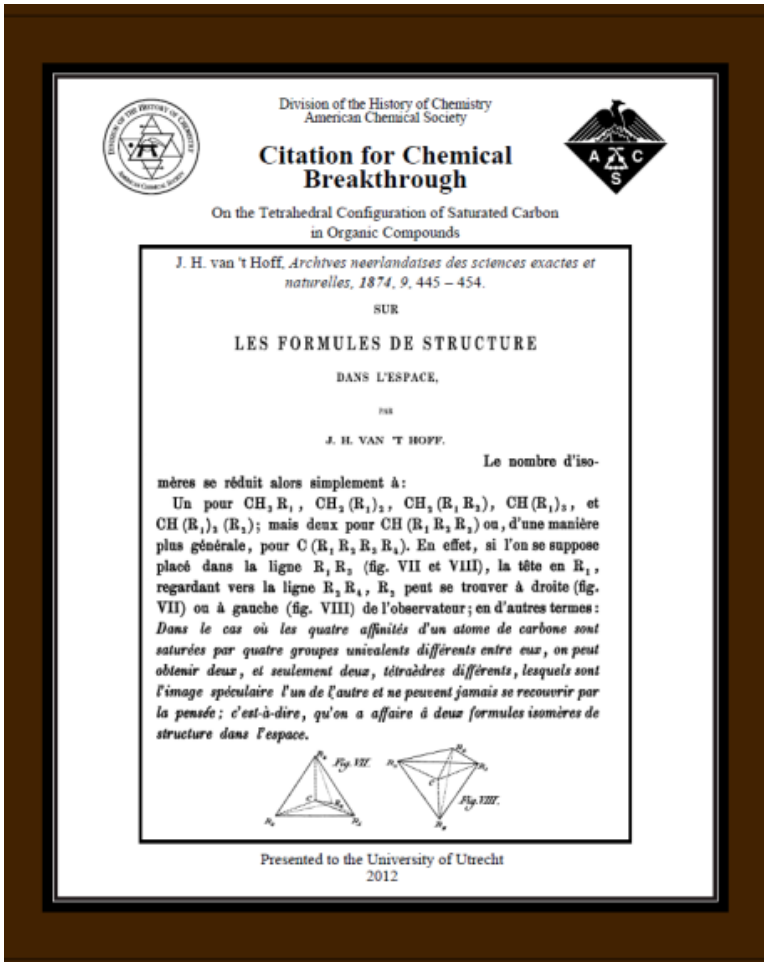
Citation for Chemical Breakthrough award

The 2012's American Chemical Society Division of the History of Chemistry's Citation for Chemical Breakthrough awards honors the Seminal work of J.H. van 't Hoff. This award program honors publications, patents and books that have made breakthroughs in chemistry and the molecular sciences that have been revolutionary in concept, broad in scope, and long-term in impact. The University of Utrecht is honored for:

J. H. van't Hoff, Arch. Neérl. Sci. Exactes. Nat. 1874, 9, 445 – 454.

The award is given to the institution from which the award winning material was published rather than to the authors or inventors themselves. Of course, in this instance, the author has long since passed. Van 't Hoff published his work on stereochemistry in his book La chimie dans l'espace in 1874. At the time, his theory was considered revolutionary and was strongly criticized by the scientific community. One such critic was the renowned editor of the German Journal für praktische chemie, Adolph Kolbe, who stated:

> *"A Dr. H. van 't Hoff of the Veterinary School at Utrecht has no liking, apparently, for exact chemical investigation. He has considered it more comfortable to mount Pegasus (apparently borrowed from the Veterinary School) and to proclaim in his 'La chimie dans l'espace' how the atoms appear to him to be arranged in space, when he is on the chemical Mt. Parnassus which he has reached by bold flight"*



Division of the History of Chemistry
American Chemical Society

Citation for Chemical Breakthrough

On the Tetrahedral Configuration of Saturated Carbon in Organic Compounds

J. H. van 't Hoff, *Archives neerlandaises des sciences exactes et naturelles, 1874, 9,* 445 – 454.

SUR

LES FORMULES DE STRUCTURE

DANS L'ESPACE,

PAR

J. H. VAN 'T HOFF.

Le nombre d'isomères se réduit alors simplement à:

Un pour CH_3R_1, $CH_2(R_1)_2$, $CH_2(R_1R_2)$, $CH(R_1)_3$, et $CH(R_1)_3(R_2)$; mais deux pour $CH(R_1R_2R_3)$ ou, d'une manière plus générale, pour $C(R_1R_2R_3R_4)$. En effet, si l'on se suppose placé dans la ligne R_1R_2 (fig. VII et VIII), la tête en R_1, regardant vers la ligne R_3R_4, R_3 peut se trouver à droite (fig. VII) ou à gauche (fig. VIII) de l'observateur; en d'autres termes: *Dans le cas où les quatre affinités d'un atome de carbone sont saturées par quatre groupes univalents différents entre eux, on peut obtenir deux, et seulement deux, tétraèdres différents, lesquels sont l'image spéculaire l'un de l'autre et ne peuvent jamais se recouvrir par la pensée; c'est-à-dire, qu'on a affaire à deux formules isomères de structure dans l'espace.*

Fig. VII. Fig. VIII.

Presented to the University of Utrecht
2012