

DANCE OF THE ATOMS

—from the C-I-L Oval

By Aleko Lilius

The field of chemistry is an odd source of inspiration for a ballet. Yet for some years now ballets, illustrating chemical processes, have been staged in several United States universities.

The idea was originated before the war by the Maryland Section of the American Chemical Society as a method of teaching chemistry. More recently Smith College, of Northampton, Mass., has arranged chemical ballets.

By this method one can see (with the aid of a little imagination) living atoms moving in the patterns in which actual atoms are thought to be based, wherever possible, on the move. This music of the dances is frequencies of the vibrations present in the real molecules, transposed to the audible range by dividing them by the velocity of light.

One ballet tells how a chemist, working late at night, falls asleep in a chair. Thereupon, shadowy forms steal forth from his tasks of compressed gas. The atoms are coming out to perform in play what they refused to do at the chemist's bidding.

First the hydrogens, clothed in brilliant red, appear and trip through a gay waltz expressive of their joy of the escape from the harsh gas laws that usually confine them. Then two atoms in black, carbons, emerge and grab four hydrogens each. Their kinetic freedom lost, the hydrogens now execute vibrations around the carbon atoms—indicating the formation of methane, with spectroscopic frequencies of 13000, 1500, 2900 and 3000 cnd.

Then four more carbons enter and join the groups. The molecules are suddenly aware of their gaseous nature and the atoms execute nuclear spins as the fast throbbing chords of the ethylene and acetylene dance are heard. As the tempo reaches its climax a new atom in lustrous metallic garb enters—the catalyst. Under her influence the acetylene molecules rearrange and, joining bonds, form the benzene ring. As the orchestra plays variations of the colorful chromatic chord of benzene, the ring expands and contracts, hydrogens sway back and forth, and the different symmetrical motions of the molecules are symbolized.

As the atoms pause to display their true nature in the ultra-violet light, suddenly a swift leaping form darts across the stage, trailing flames. It is fire, come to destroy the molecular arrangement which has just been synthesized and change it to produce combustion. Following fire the oxygen atoms, clothed in blue, enter and seize the hydrogen and carbons. First there is a dance of water molecules thus formed. Then carbon monoxide and carbon monoxide then combine to form methyl alcohol. As the synthesis proceeds the music turns into a syncopated cakewalk—the crazy dances of ethyl alcohol. There is a swift whirl. The atoms hesitate, sway and stagger about, drunk with the motions they have discovered in this new combination.

At this point the chemist wakes up and the ballet proceeds to a surprise

LAVAL UNIVERSITY

A. C. U. P. Feature

This is a feature of C. U. P. gathered and edited by Queen's University. It is designed to acquaint readers at U. N. B. with the institutions and personalities of other Canadian Universities.

Laval University was established in 1852 by a Royal Charter, and was named after the first Bishop of Quebec. Starting with the faculties of Arts, Theology, Medicine and Law, it has since added another seven. To these eleven faculties are affiliated many research stations.

The University proper has an attendance of 3600 to whom must be added the 12,000 students of 30 affiliated colleges.

The general library of the university, and the other specialized ones have, together 900,150 volumes.

In the field of research in nuclear energy, Drs. Rasetti and P. E. Agnon have distinguished themselves. The latter is a member of the Atomic Energy Council Board.

The University council is planning the erection of a one square mile University city. It hopes to cover the cost by a public subscription of \$10,000,000.00.

The students are very active in the field of sports and other extra-curricular activities, or which purpose two buildings are provided. Their general association (ACEL) owns a ski chalet at lake Beauport. Two of its skiers Jalbert and Bemier are prominent on the Canadian Olympic Team.

ending. But enough has been said to indicate the artistic and educational possibilities that open up when Terpsichore, the ancient muse of dancing, is introduced to chemistry.

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S R C ELECTIONS

Attention - members of the Senior, Junior and Sophomore classes:

Nominations will be received for the following positions.

Senior Class - Class President, Class Vice-President, Two SRC Representatives.

Junior Class - Class Secretary, Five SRC Representatives.

Sophomore Class - Two SRC Representatives.

Nomination papers are to be signed by the nominator and seconder, and submitted to the following by 5:00 p. m. Tuesday, October 5.

Senior Class - Fergus MacLaren, Doug Cooke, Ted Bedard, Ed Bastedo, and Kay Gough.

Junior Class - Gerry Bell, Betty Kilpatrick.

Sophomore Class - George Buchan, Bill Haines.

Preliminary Budget Meeting

All fall budgets must be passed in to Ed Fanjoy, SRC President, Hugh Church, SRC Treasurer, or Virginia Bliss, SRC Secretary, by 5:00 p. m. Monday, October 4.

The preliminary budget meeting will take place Wednesday, October 6, at 7:15 p. m. in the Geology Lecture Room of the Forestry Building.

In accordance with the SRC Constitution all managers of teams and responsible officers of all campus organizations must be present.

SUNDAY NIGHT CONCERTS

8:30 p. m., October 3.

Alexander College, Hut One

"Don Giovanni", Acts II, and VI.—W. A. Mozart

(Brownlee, Baccagni, et al)

Official opening of the Art Centre

— Saturday, Oct. 2 —

2:30 - 5:30; 7:30 - 9:30

Special Exhibition of recent works of art by people of Fredericton and vicinity.

Evening classes and other activities at the Art Centre are primarily for students of the University. Others may join the weekly working classes for a fee of \$6.00 per term.

Open for music, reading, or discussion every afternoon from 2.00 - 5.00 except Saturday.

For further information call at the Alexander studio of the Observatory Art Centre - Hut One. Entrance on Smythe Street.

Art Director - Miss Lucy Jarvis

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HARVEY STUDIO

Canadian Officers Training Corps

All members of the U. N. B. Contingent will meet in Room F107 Forestry Building at 1900 hours Tuesday, October 5 1948.
Major R. J. Love, O.C.

COTC Orderly Room

All concerned, please note that the Orderly Room is now Room 7, Hut "R" Main Campus.

Wanted

The UNB Contingent COTC requires an Orderly Room clerk (civilian). Knowledge of typing and office procedure required; ability to take shorthand preferable. This is a part time job with good pay. Interested persons contact Major Gagnon, Resident Staff Officer, Room 7, Hut "R", Campus during office hours.

COTC Recruits

There are a number of vacancies in the UNB Contingent COTC. Recruits will be accepted from the Second and Third year classes with a limited number from the Freshman class. Watch this paper for further announcements. Contact the O. C. Major R. J. Love, the Adjutant Captain Stuart MacNutt or the Resident Staff Officer, Major L. A. Gagnon.
Call at Room 7 Hut R for details.

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