the alchemist

THIS AWARD PRESENTED TO

DR RAYMOND ANNINO

FOR BEING THE BIGGEST, NICEST,
FRIENDLIEST CUB SCOUT IN THE
WHOLE, WIDE WORLD.

A Few Words From the Editors:

Well It's Christmas time again and as usual the "Alchemist" has its annual list of goodies to be given to the Profs, students and this year we have something for the Chemistry Department as a whole.

But, before we get on to that, we would like to say a few words about the "new" Alchemist. In the past, many people have said that the Alchemist should be more than just a "bunch of funny stories," it should contain something of value and the news of the Chem. Dept.

To those people we dedicate this issue - you have been heard. Now and in the future, "The Alchemist" will contain as much news and as many articles of merit as can be found.

Without any further introduction and wishing all of our readers a very Merry Christmas and a Happy New Year, we proceed.....

Editorial

The Responsibility of the Scientist

Whether or not the arts and social sciences are deemed of negligible value by our technological epoch is debatable. That there are individuals who hold this to be true, is indeed a fact. Often times is heard "Philosophy, bah!!", "Ethics, bah!!" These people have an opinion which must be considered both for the reason that some do hold it and for the reason that others are sometimes inclined to it.

If such a devotee to pure scientism tries to give an honest defense of his views, he will usually say that he is not interested in other fields because he can do more as a scientist for himself and others by working more fully at being a scientist. It is assumed here that a lack of interest is an honest one and not arising merely through lack of industry or other such unworthy motives.

Surely science is popular because it can reveal to man something of the world in which he lives. It is granted that some things are merely "interesting" to men because they reveal some of the truth of the world to him. By coming to this truth, this greater understanding, men can live better. Now it can be asserted that science is only <u>good</u> for man because it enables him to live better. If something can be conceived of as being <u>true</u> (e.g., an isolated fact) without contributing to the <u>truth</u> (man's world,) then this thing can only be a "so what?" But we know that science is not existing as a "so what?" Therefore, it must exist in order to lead man to truth.

In theory then, truth leads to a better life for man, But, how can this be achieved? What will keep man from saying, "so what?" to the truth? The scientist must be able to see science not as an end, but as a means to an end - the end being the betterment of mankind. Now most likely, the "pure" scientist would grant all this, but say that he is best suited to help man by being a "pure" scientist. But it should be obvious from the above discussion that the truth of the world is not only a scientific truth and in order to see the place of a certain truth, one must be able to integrate it with the truth of all men. There are religious, political, economic, sociological, etc., aspects of man which the "pure" scientist does not consider. To be alienated from these other aspects of man is obviously to be alienated from man himself. Now, do scientists want to study <u>man's</u> world or a meaningless world? The only real world is the one in which men live, so that if

a scientist tries to study life "out there, apart from himself," he will never succeed and consequently will live a frustrated life.

This does not mean to say that everytime Dr. Annino turns on his pH Meter he has to say, "Let's see, will this help control the quality of food in North Africa." This would be a ridiculous, impossible situation. But, the scientist must always attempt to know what the problems of man are. Maybe then some of the $40 billion being spent on the defense program will be turned into research on foodstuffs, water, energy, extenction of disease, etc., for man. It will only be through a background which teaches values, presents the facts of man's existence and also the right questions, that men will achieve the outlook they need to become valuable to the world. Scientists must not forget that they are part of society. A knowledge of and interest in the arts and social sciences will enable him to open the door to society when he closes the door to his laboratory.

Regional A. C. S. Group

On Thursday, December 3rd., the first business of the recently formed regional A.C.S. was held at Niagara University. Formation of this group was initiated by students at the University of Buffalo in October. The schools participating in the group are D'Youville, Rosary Hill, SUNYAB (U. of B.), Niagara and Canisius. At the meeting, a film on electronic structure of the elements was shown, two students from SUNYAB presented short seminars on their research projects and refreshments were served afterwards.

The purpose of the group, although not formally stated, is to instill a spirit of competition and cooperation in the area chemistry students. This is accomplished by holding two meetings a semester with a different school serving as host at each meeting. Also at each meeting two papers are presented by students from a non-hosting school. It is hoped that in presenting these papers, a spirit of competition will be stimulated among students. This will prepare them for the professional world and the competition involved therein.

This seems to be a good idea. School loyalties dissolve away and one becomes interested only in the pursuit of scientific knowledge. One difficulty which may arise is that the competition will be among schools and not the individual students. The group does not wish to pit Rosary Hill against D'Youville or Canisius against U.B. This should not turn into a College Bowl of Chemistry. A partial preventive for this would be to have one of the two papers presented given by a student from a different school than the first.

One serious objection raised at the meeting was that ones' individual project may not be as interesting or understandable to others as it is to him. The underclassmen are directly involved here. I do not feel that the group was organized as a sounding board for seniors and so many of the research projects are of such a technical nature as to not be readily understood on the freshman, sophomore and possible junior level. To overcome this, papers might be presented on topics of a more general nature. I have found that historical chemistry is very interesting. The development of a theory through the years always fascinates me. Such topics as these do not require a prodigious amount of research and are interesting and informative.

Let me state now that I am not attacking the two fine talks which were presented at the last meeting. New topics on benzyne and norborene chemistry are

interesting to me and I thought, well presented.

At the start of any organization, there are many bugs to be worked out. It is hoped that my humble criticism will help in some small way to make the regional group a more efficient and smoothly working group.

Beer

On November 19th., Mr. Caul, Laboratory Director for International Breweries (a rather well-known concern in this geographical area) spoke to a record crowd of the American Chemical Society. (I actually counted three English majors, a Business major and even one fellow majoring in Greek.)

We were awe-struck to learn that beer is one of the earliest drinks discovered by man. This is especially amazing, considering its utterly foul tasts. It's surprising that Harvey C. Nianderthal didn't throw it away and go on to discover Coca-Cola.

So to get down to the thing that all you amateur moon-shiners have been waiting for (the recipe.) I'll begin by letting you in on a little secret, beer is an alcoholic beverage (surprise, surprise) made from barley and flavored with hops. Barley was chosen as the best grain because its husk remains on the kernel to protect the inner germ from injury.

The first step takes place at the maltsters. Here, the raw grain is steeped in 15°C water to bring its water content up to 45%. It is then dryed on an open floor for upwards to seven days, then baked in a Kiln to germinate it. This causes the production of enzymes needed to break down the barley starch into maltose sugar. This maltose is a long chain of glucose molecules and is found in two forms, 1:4 amylo-maltose and 1:6 amylopectin meltose, a branched chain

Two entirely different enzymes are needed to break these sugars into fermentable sugars. One to break down the straight chain and another which is able to break the chain at the branches.

The dried grain is then shipped to the brewer who soaks it into a porridge-like mess called mash. In the mash, the proper ratio of enzymes must be maintained so that the proper amount of glucose is produced. This is strained to filter out the husks and kernels and the remaining sugar solution is called wort.

The wort is combined with the resin of the hops to give the beer its bitter flavor and with yeast to produce the alcohol. This is done in huge copper kettles. After formentation has taken place, the liquid is filtered and the final product, beer (hurrah) is checked for clarity, alcohol content and purity. By now it is ready to be bottled, delivered and consumed.

By now, all the members with tongues hanging low, adjouned to help Mr. Caul with his sales. If I ever again get into the position where I can volunteer to take pen in hand and write another article, I'll spend my evenings in the same past time for which the ACS adjourned.

Book Review

It has been recently mentioned that the Alchemist lacks something which all the better magazines contain. At first, we on the Alchemist Staff couldn't imagine what this could mean, for "MAD" certainly has nothing more than a bigger budget.

After a period of contemplation, we discovered that some must feel that the "better magazines" are Time, J. Chem.Ed. and even C. and E. News.

We now know what we have been lacking. Therefore, in keeping with the Alchemist policy, to please all, we hereby initiate "The Alchemist Book Review."

THE ALCHEMIST BOOK REVIEW
(If we review it, it must be bad)

Reviewed this month-"Quantative Analysis - Pierce, Haenisch and Sawyer, John Wiley and Sons (1937, 1940, 1948, 1958) 4th., ed.

The authors begin by clearing up some misconceptions concerning the construction of wash bottles which have probably plagued all chemists since their freshman days. Extensive treatment of the analytical balance, pipets, burets, filtering procedure, etc., is offered.

Under care of the balance, the authors list - "Do not monopolize the balance, respect the rights of others. In a Kjeldahl procedure the authors say, "Clamp the flask in a slanting position in a hood, and heat cautiously over an open flame...take care not to put the hands beneath the flask during the heating...(I would imagine they would probably be in the flame.)

The two examples sited may give the reader the impression that the authors also wrote ROTC Training Manual 145-30.

The authors further state that in precipitate formation "The process is initiated when a few ions clump together, to start the nucleus of the crystal.

Statements such as this may give the reader the impression that theory is somewhat naively treated.

This book is an excellent, practical book, but its theoretical explanations such as indicator theory are poor.

Our Missionary

As many of our readers know, one of our graduates of last year was called to a higher duty than most of us seek in this world. Charles Richards chose or was chosen to carry the truth he had learned here to the pagan and backward people of Hawaii.

A few days ago, the "Alchemist" received a letter from this humble, quiet and holy man, telling us of his works in that lush and sunny land. The following is that letter:

Fellow Philosopher:

It will rejoice your ears to hear of the works that I have accomplished here. You would not believe the sights which I had to endure, bikini-clad women running in the surf and partaking of bodily pleasures. Now mind you, this was but three short months ago. Some of them even tried to tempt me, but I stood fast. Since this first encounter with the natives, I have given purpose to their miserable (?) lives. I have shown them truth. At first, they did not want to follow me. I even suffered several indignities and even the doctors scoffed at me when they removed Klubertanz* from my ------, page by page. I have since brought the natives to see truth. Now there are no longer bikini-clad women running in the surf at Waikiki. There

are no longer wild drinking parties and other transgressions. Now there is truth. Throughout the land, Klubertanz reigns. There are no longer Lauaus, there are now Klubertanz recitals. Indeed you would be proud if you could see how I transformed these carefree people into a group of serious philosophers. I must end now for the natives are preparing to burn down my hut for the 18th time.

Chuckimus Maximus

*Klubertanz - the author of a treatise on the ethics of St. Thomas. (ed.)

Cookies for Chemists

Several days ago, a battered and broken box arrived at Canisius, addressed to "The A. C. S." This shoe box sized package had obviously spent several, rather rough weeks in the mail in its journey from Arkport, New York.

Upon being opened, it was found to contain several dozen rather stale cookies which, however, were eagerly devoured by all those present. The following note was found inside the box and it has been ascertained that the baker of these tidbits was none other than Angelo Fatta's girlfriend, Sue.

For the preservation of the bodies which house some of the greatest minds this century will produce.

Oh, Ange, if there are enough left, you can pass the cookies around the Chem. Dept.too.

Realizing that you must all be at the point of malnutrition, the pleas that filled my kitchen this morning, the cries from my mixing bowls, measuring cups and pots and pans to come to your rescue brought tears. One thought clouded my mind, one sound rang in my ears, one vision appeared before me. There you were, hungry, starving, vultures, crying, screaming, tearing " Angelo the "Wanderer limb from limb because of his unexcusable negligence, his failure to return to the homeland with the life sustaining morsels he had so generously promised.

Hope you like oatmeal cookies-that's the best I could do this A.M. Wish you would check the "Wanderer's" travels for the next 6 weeks.

Your friend in Arkport

Labs of the Future

Setting: Industrial Laboratory in the year 2000 A.D.

The Swiss bell chimed once and all the analysts simultaneously sat down at their places for a five-minute break. John Hermindinger was glad for the rest, for it had been a tough morning. He was not feeling too good and consequently had finished only two of the required three analyses. Then John heard the dreaded groan which could only mean more work. There next to him was the Mechanized Laboratory Inspector, a small machine very adept at hiding behind benches and also an excellent "labor spy," as they were called. It

was the inspector's duty to see that everything was going along on schedule and the characteristic "OOOHHH!" meant his disapproval of some situation.

He had spotted John's failure to complete his third titration and had responded accordingly, "OOOHHH!" No five-minute break for you. A "dammit" from the inspector and John hustled back to work.

By noontime John had caught up in all his work and was experiencing a great need to go to the men's room. He called the inspector to his bench and informed him of the situation. The inspector gave John a pad and pencil, with which he was to write down the purpose of his visit.

John came back 3.16 seconds too late. For this he was reprimanded severly and docked in pay.

The afternoon was really rather uneventful. Oh, the two-way television at John's desk broke down and the inspector had to use mirrors to watch him, but the only sounds to be heard were the usual cries of "work" and "OOOHHH!!" "Groan!!" Once the inspector caught John looking out the window and injected three seconds worth of H_2S into his booth, but for the most part, John was able to fool the inspector into thinking he was working.

The analysts could not leave immediately at 5 O'Clock because they were to be punished for someone dropping 3 ml of water onto the floor. After the guilty party had confessed and had paid for the wasted water, John and his friends were let out of their booths and allowed to go home. The friendly inspector, gray smoke spurting from his nearly exhausted fuel system, chugged off to his recluse to await another day.

The Retreatant's Terror

Following school policy concerning senior retreats, docilely this writer and the Vice-Pres. of the ACS, Mr. Geiger, boarded the bus for the retreat house. Little did I know at that moment what was in store for me during the course of the next three days; nor did I realize the Dr. Jekyll-Mr. Hyde nature of Mr. Geiger.

The trip down was uneventful except perhaps for the fear that we had traveled so far and would presently fall off the edge of the world. But that too was forgotten as we arrived at the St. Ignatius Jesuit Retreat House, which was hidden under a snowbank in the middle of Clarence Center (a sort of vegetated Death Valley where neither deer nor antelope roamed.)

The first night Mr. Geiger began to show signs of being..... well, mentally disjointed. At supper he stared, grinned and made animal noises when-ever our sixty year old waitress drew near. His appetite was unaffected, however, in fact he took double his share to make certain he would not become a malnutrition case. He eaggrly petitioned all at the table to give him whatever scraps they could.

The next day meditation and talks started in earnest and I must say that Mr. Geiger was most affected by these. In fact his meditation exercises were such that he seemed transported into a trance-like state, much the same as he experiences in all his classes. I am sure you all have seen him in this state with his head inclined on his hand, his eyes closed and his breathing being slow and steady so as not to disrupt his thought processes.

But as the day concluded, something in Mr. Geiger seemed to snap. He suffered from psychosomatic neurosis of the medulla oblongata or in common parlance he bacame horny as hell. First, he boobytrapped my room with an insideous device calculated to set books, hangers and waste basket flying the minute I entered my room. I shrugged this off thinking that it would be the last of its kind, but I was sadly mistaken. At exactly 10:25 P.M., there was a knock on the door and I opened it only to be blessed with a sopping wet hair brush. Well now I thought that this had surely been it, but the worst was yet to come. I was in my bed and half asleep, the time was 12:34 A.M. I thought I heard my door opening, but not immediately attacking, my expert knowledge of judo was of no use to me, for I looked up and was staring down the barrel of a can of Foamy Lather. Before I could react the sniper fired and fled, but his aim was as poor as his mental condition. The would-be assassin only succeeded in leaving an extraordinary piece of modern art on my wall. My immediate reaction was to start naming this art-work. The names White on Yellow, The Stickman Meets Dragonlady and even Cleanliness is Virtue were dismissed when I reflected on what the Retreat Master might call it and so hastily, but regretfully I distroyed its last traces. The crises had been reached, the ordeal was over.

The last evening's deeds must have served as a therapy for miscreant Mr. Geiger for the next morning he was perfectly well. I could tell he had been temporarily cured because of the many idealistic statements he began making. The rest of the retreat ended without incident.

I feel I must caution this reading public, however. Mr. Geiger's mental condition is only metastable, so if you ever observe him grinning or making animal noises or meditating in class -- Run, don't walk!! His next victim may be you!!

Hermann Ermandinger's German for Chemists
or
Vat every Chemiker Studenten should be knowen in the Laben

Arbeit - die thinge you ist tomorrow doen

Blau - die color you ist turnen vet worken mit die ozone

Bier - die universal solvent

Differentialrechnung - die calculus you ist flunken

Explodieren - vat your reaction ist doen ven you ist not watchen

Fink - vat you ist callen die student mit die highest mark

Gemischt - vat die studenten ist gefeelen ven der professor ist gesnowen then.

Himmel - die time your A ist gecomen

Hund - how der student muss worken fur die A

Langsam - how die reserachen ist goen

Schmelzpunkt - die time you ist discoveren dass die compound ist impuren

Schneestrum - die lecture bei der professor

Spektroskopie - those comischen lettern - IR, UV, USA, USSR, UFO, HUAC, usw.

Resultat - fur vat you ist wishen but not getten

Verflucht! - vat you ist sayen ven things ist goen wrongen

Verruckt - vat all chemikers ist.

Santa's Christmas List

Dr. Stanton - a piece of unbreakable glass for his wife's desk picture.

Dr. Annino - a pajama top to match the stripped burmuda shorts he wore to the A. C. S. Baseball Game.

Dr. Szymanski -"it should be obvious."

Dr. Erickson - the reason there's never enough Koch's.

Fr. McCarthy - sabbatical leave to go skiing.

Dr. Van Verth - a megaphone.

Fr. Lemkuhl - a cloud for the second coming.

Fr. Gillen - a can of "Brasso" for the "Golden Dome."

Mr. Signeur - a can of bowlene for his sink.

Mr. Burke - "You know!, Ho, Ho!"

Broda - year's supply of bottomless popcorn boxes.

Galeza - a date with Blaze Starr

Geiger -"Dichotomies"for married graduate students.

Maslowsky - a positively radiant sodality pin.

Scanlon - a white shirt.

Janiga - tape for his mouth

Russell - a "nihil obstat"

Fatta - book titled "Stewardess Stories."

Boczkowski - A Frank Wornjarowski Christmas Album.

Bake - An appreciative research director.

Dee - A bunny trap from Hugh Hefner.

Rodney & Larry - unlimited cuts in P-Chem.

Dilecki - box of cough drops

Huddleston- a map on how to get to Canisius.

Schnobble and Chimp - Pair of handcuffs so they would never have to be apart.

Hamm - a pair of elevator shoes.

Technical Report

The Alchemist has not contained a technical report since the great "manurium" scandal. But for this issue and since we have presented the Chemistry Dept. with a "Turbo-Encabulator" it was felt that all the members of the Department would want to know as much about our new instrument as possible.

The following is a reprint of the technical bulletin which accompanies each new instrument:

SUBJECT: TURBO-ENCABULATOR

1. For a number of years now work has been proceeding in order to bring to perfection the crudely conceived idea of a machine that would not only supply inverse reactive current for use in unilateral phase detractors, but would also be capable of automatically synchronizing cardinal grammeters. Such a machine is the "Turbo-Encabulator." Basically, the only new principle involved is that instead of power being generated by the relative motion of conductors and fluxes, it is produced by the nodal interaction of magneto-reluctance and capacitive directance.

2. The original machine has a base-plate of prefabulated aluminate, surmounted by a malleable logarithmic casing in such a way that the two main spurving bearings were in a direct line with the pentametric fan. The latter consisted simply of six hydrocoptic marselvances, so fitted to the ambifacient lunar wane-shaft that side fumbling was effectively prevented. The main winding was of the normal lotus-o-delta type placed in panendermic semibovoid slots in the stator, every seventh conductor being connected by a non-reversible tremic pipe to the differential girdle-spring on the "UP" end of the grammeters.

3. Forty-one manestically spaced grouting brushes were arranged to feed into the rotor slip steam a mixture of high S-valve phenylhydrobensamine and 5% ruminative tetryliododexamine. Both these liquids have specific pericosities given by P-2.3Cn6.7, where n is the diathetical evolute of the retrograde temperature phase disposition and C is Cholmodeley's annular grillage coefficient. Initially, n was measured with the aid of a metapolar refractive pilfrometer (for a description of this ingenious instrument, see L. B. Rempelvertstein in "Zeitschrift fur Elektrotechnistatische-donnerblitze", vol 8) but up to the present date nothing has been found to equal the transcendental hopper dadoscope. (see "proceedings of the Peruvian Nitrate Association," June, 1934.)

4. Electrical engineers will appreciate the difficulty of nubing together, a regurgitative pugwell and supramitive wennel sprocket. Indeed, this proved to be a stumbling block to further development until, in 1942, it was found that the use of anyhyrous nangling pins enabled a kryptonastic bolling ship to be tankered. Infrared mechanics then added three lead telluride oscillators in a testicle coupled diode, triggered by the beta-gamma radiation from a Geiger-Muller counter in series with the AC line.

5. The early attempts to construct a suffieiently robust spiral decommutator largely failed because of the lack of appreciation of the large quasiplastic stresses in the gremlin stud; the latter were specially designed to hold the roffit bars to the spamshaft. When, however, it was discovered that wending could be prevented by a simple addition to the jiving sockets, almost perfect running was secured. A number of free neutrons were observed in the bearings, each being circled by a meson. These were removed by a sulphiguminous filter with a Bezrutch type of core.

6. The operating point is maintained as near as possible to the h. f. ram peak by constantly fromaging the bitumogenous spandrels. This is a distinct advance on the standard nivelsheave in that no dremcock oil is required after the phsae detractors have remissed the discriminator protons.

7. Undoubtedly, the turbo-encabulator has now reached a very high level of technical development. It has been successfully used for operating nofer trunnions. In addition, whenever a barascent skor motion is required, it may be employed in conjunction with a drawn reciprocating dingle arm to reduce sinusoidal depleneration.

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