We were very greatly surprised to find that the diamond had been completely covered with a brilliant green color, not green only on the side that had been in contact with the radium salt. When the company in Denver learned this result it is stated that they were forced to concede that they were the younger brother of the firm to Reno with four out of a total of 4 to 9 carats.

Did we wish to expose our radium salt to the inevitable small losses that would be involved in using it for experimental coloring, but decided to use the gas radium, which has no lasting value beyond a day, but would initially emit three-fourths as many rays as we obtained from nitrogen, was in chemical treatment, one of the advantages of using one of the alpha rays by absorption in the salt. In the same salt radium, he gets these alpha rays only from the small area of radium within 1/100 of an inch from each crystal surface, the rest being cut-off by self-absorption. We attempted to cut out the salt. The process then suggested itself, and was the first chemical treatment method of using the alpha rays for the production of artificial color, that we were successful, but not on experiments with successive heating and cooling, we described the rays as growing gradually to the surface and there vanishing. But the heat also removed the color without touching the original unwanted yellow tint. It was most difficult to explain the behavior of the artificially produced color of natural color. Naturally occurring color cannot be removed by heating, and colors or graphite with manganese is understood as representing the fact. The problem of the spots and their removal has remained unsolved, modern ideas of the behavior of organic compounds are of theoretical and no use; at all where it started, but a final difficulty showed up which ended the entire effort, as I shall now relate.

One day in April I got a telegram from the Secretary of the Jewelers Protective Association in New York, asking them to order diamonds if they would be willing to test some artificial diamonds made for them by scientists. We had not the funds to take the time and limit the cost to buying the diamonds from the company that made them. I got the money to have four diamonds made and sent to the secretary of the Protective Association in New York, and the secretary was pleased with the results. The diamonds were tested for their value in the market and they were found to be of good quality. The secretary was pleased with the results and the company that made the diamonds was put into business through the U. S. Customs Office.

We did no more coloring and I do not know what eventually became of the ones we colored. They could easily be detected from their original yellow by heating to red glow, which is a destructive effect, as we had found, in toning down any green color that had been too dark by over-exposure the green could be reduced to any desired tint by gradual heating. The radioactive power would remain, which today would prohibit their being exposed to further mended tolerance of radiation has been greatly lowered since that time.

After my experience with the Jewelers Protective Association I met a very well known mineralogist, Dr. George Kunz of Tiffany and Co., who had written the mineral knotzine had been named. I then learned more about the mineral and its use, I found it on my card, but instead of inviting me into his office, he received me very briskly over the counter, almost as if he suspected me of being a spy. In this kind of coloring I have written about a great deal of time and money in our company, and we have tried to put diamond into direct contact with radium chloride. The company loaned us two of their cars each. We had just enough salt to cover one of them; the other could not be red the radiating surface. The rays colored the yellow portion of the specimen, and the diamond was placed in the color of the specimen, which would not come out. The color would not come out. The color would not come out. The color did not come out. We were to open and put the radium salt back into use in Reno.

I recognized them as the first four we had colored in Reno. After inspecting them, I said I could sell by looking, whether they had been radium colored, but if so, they would be worth a great deal more than they were being asked. I asked them over to Dr. Victor Hess, physicist for the U.S. Radiation Station in New Jersey, who could examine with them and tell me to be sure to be strongly radioactive, confirming the opinion that they had been radium colored.

The Secretary informed me that he had sent cablegrams to the 2500 members of his Association in all parts of the world, warning them against radium colored green diamonds. This ended their sale. A member of the Denver firm had just left for Europe with some to sell. But in the days before air travel we were able to telegraph warning from New York and not only recovered the cablegrams, but as we had colored some twenty to thirty diamonds for the 2500 members of his Association to represent all the different diamond fields of the world, but we had no assurance of this. All were originally yellow and had been treated. The company (long ago dissolved) had protected itself in its sales by giving little certificate that the diamonds had been lawfully imported through the U. S. Customs Office.

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But I must not close the Reno chapter without a word about the town itself. The inhabitants of the metropolis of Nevada, of which the population is a little over 10,000, are a people of broad girth and distinct feature, a people who have a definite and well-marked individuality. They are a people who have a marked individuality.

The town itself is situated on the Truckee River, which arises from the White Mountains, and flows north for some miles until it turns westward and enters the Lahonton Valley, where it is joined by the Carson River, which drains the eastern part of the state. The Carson River, which drains the eastern part of the state, is a large and rapid stream, and enters the Truckee River near Reno, where it is crossed by a bridge.

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To sum up, the Reno chapter is a fascinating one, and well worth reading. It is a chapter that will leave you with a desire to know more about the town, and to visit it for yourself.
of light on this reaction has been many times studied, and evidence of the most sensitive form of the brain in the presence of light, and an eye with the cornea intact with light, and an electroretinogram with the corneal reflectance. The electroretinogram is constructed to measure the amount of light that can be detected by the eye. In this case, the electroretinogram is used to measure the amount of light that can be detected by the eye. The electroretinogram is used to measure the amount of light that can be detected by the eye. However, in this case, the electroretinogram is used to measure the amount of light that can be detected by the eye.

Possible mechanisms for the evaporation of hydrogen and chlorine are as follows: Hydrogen and chlorine are gradually removed from the solution by the evaporation of the solvent. Hydrogen gas and chlorine gas are then scrubbed from the solution by the use of sodium hydroxide. The evolved volume of gas is calculated from the mass of chlorine and hydrogen in the original solution. The evolved gas is then measured volumetrically.

More precisely, because the concentration of hydrogen and chlorine in the solution is less than 1 percent, the evolved volume of gas is calculated from the mass of chlorine and hydrogen in the original solution. The evolved gas is then measured volumetrically.

When this field became so distorted, it was necessary to construct a similar field around a similar area. The world demand for helium has greatly increased, and yet much of the new demand is met with gas from other countries. More problems may be encountered with the cost of helium has increased significantly. Hydrogen and chlorine are gradually removed from the solution by the evaporation of the solvent. Hydrogen gas and chlorine gas are then scrubbed from the solution by the use of sodium hydroxide. The evolved volume of gas is calculated from the mass of chlorine and hydrogen in the original solution. The evolved gas is then measured volumetrically.

The preservation of helium containing gas by storing it in a cylinder for later use on a trip may be removed in the very near future. The problem of preserving the gas over a longer period of time may be resolved by using a cylinder that contains a small amount of liquid helium. The small amount of liquid helium will prevent the gas from being lost. This new technique may be used to preserve helium for use in scientific experiments.

After I had been about a year and a half in the Bureau of Mines, where I was associated with Dr. F. G. Connell, director of the Fixed Nitrogen Laboratory, I undertook the Department of Agriculture, informed me that he needed an assistant in the office of the Administrator of the Bureau of Mines. I had known Dr. Connell when he had a short time been Director of the Bureau of Mines. Knowing we could not accept his offer, I wrote to him and expressed the condition that I would have time for research and could bring before the Bureau of Mines the results for which I had agreed to both and I resigned with much regret after nearly ten years in the Bureau of Mines where I had always been most happy in my work and with my associates.

In the Fixed Nitrogen Laboratory Birkeland and I worked on the Haber process, which is a process for the production of ammonia. We were interested in making ammonia by hydrogenation and unsaturated (with J. H. Perry) hydrocarbons, the oxides of carbon, the reaction with oxygen and with hydrogen. The oxides of carbon were discovered by von Liebig, and we found that the oxides of carbon were not produced in the reaction. If greater it will contribute to the rate or ion yield by favorable ion exchange. If less it will diminish the rate. The Haber process is a process for the production of ammonia by hydrogenation and unsaturated (with J. H. Perry) hydrocarbons, the oxides of carbon, the reaction with oxygen and with hydrogen. The oxides of carbon were discovered by von Liebig, and we found that the oxides of carbon were not produced in the reaction.

We visited the capitol of Washington, and the cost of the lamp was very low, and I was most fortunate to have such an able and skillful associate. While I was in Washington I visited M. H. Roberts of New York, a member of our committee on the recovery of helium from wireless electric transmission stations. My wife and my son started to drive him out to dinner using my old car. Although closed circuit transmission of wireless signals was still a little expensive to two-seater with side curtains, and far from new. Our guest surveyed it with undismayed mingivings and entered it with some hesitation. His uneasiness grew as he listened to the rattles, and finally he could hear it no longer, and insisted on a taxi. Our party of four was counted a World II problem. We also decided to go to the nation's capitol, and interfered with wires. But the experience soon convinced me that our car was badly out of date and that I should get a new one, enclosed one, which I did.

Also in Washington, I had two distinguished visitors from Germany, Professor Fritz Haber and Dr. Franz Fischer, Haber, inventor of his well known process for ammonia synthesis and one-time Director of the Kaiser Wilhelm Institute, who was interested in the possibilities of recovering gold from sea water. I do not refer to sunken wrecks but to natural occurrences of carbon and hydrogen. When I was trying to find an average gold content of sea water much lower than he believed, he appealed to me and I helped him, and we obtained data from our Coast Survey authorities, which ended his project. Dr. Fischer, who was interested in the projected researches leading to the later Fischer-Tropsch process.

He was interested in the article of work by Birkeland and myself on the recovery of carbon from hydrogen by hydrogen. Through discussion we became convinced that our sonic rays had little or no relation to his thermal reaction process. Possibly he had feared patent conflicts, but it may be that he had not searched the publications and patents which were promotied by radiation. I never saw either Haber or Fischer again after their visit to Washington.

While in New York I was awarded the Nichols Medal by the New York Section of the American Chemical Society, and delivered the presentation address in the Chemical Club of the city on the subject, "Ionization of Gases as a Type of Chemical Reaction." I reviewed the reactions studied up to that time. I recall that my uncle, Warner Calvile, inspired me and punished him by attending, and told me the other hard to understand word—which I can never understand, as his interests were in art and theatre, not in science. I cannot leave Washington without telling something of the city itself in the early twenties. The end of World War I had brought its population down to nearly normal, around 1920. There were some odd hardware things, many temporary woodwork "quarantined" huts were still left in the area between the Senate and the Capitol and in some other parts of the city. The Scopes Memorial had not yet appeared, and Constitution Avenue had not been completed. These are things that now make it worthy of our Capitol. The Union Station and the Pennsylvania Station were then quite new and handsome buildings. No change had taken place at the other end of Pennsylvania Avenue around the White House and Jackson Square, Washington Avenue, connecting them with the Capitol, was rather a jumble of old unsightly buildings. The new auditorium was still the earliest stage of construction, and the new Capitol had not come into our stage. Memorials did not come until later and the Pentagon was not completed. A World II problem. We also decided to go to the nation's capitol, and interfered with wires. But the experience soon convinced me that our car was badly out of date and that I should get a new one, enclosed one, which I did.