


SINCE  1841

WOODLAND

HISTORIC CEMETERY & ARBORETUM

William Hale Charch

March 20, 1898 - July 13, 1958



William Hale Charch
Inventor: Moisture-proof cellophane

William Hale Charch was born on March 20, 1898 in Dayton, Ohio. He attended and graduated from Stivers High School. He taught one year in the Stivers Chemistry Lab before heading off to Miami University. In 1920, Mr. Charch earned a Bachelor's degree in Chemistry at Miami University and then headed to Ohio State University where he received a Doctorate's Degree in Organic Chemistry.

After graduation in 1923, Dr. Charch began working at General Motors Research Laboratory in Dayton under the guidance of Charles F. Kettering and Thomas Midgeley. His first job was to work on anti-knocking agents for gasoline.

In 1923, DuPont had the manufacturing rights in the United States and in 1925, hired Mr. Charch to find a means of making cellophane moisture proof. Cellophane was great for wrapping packages and it was waterproof – but it was permeable to water vapor. Thus it was not suited to wrapping products whose moisture content was important.

By 1927, he discovered a nitrocellulose lacquer, when applied to cellophane, which was invented in 1908 by a Swiss chemist, made it moisture proof. He tested more than 2,000 formulas and devised



a workable process to manufacture the new product.

In 1927, DuPont sold \$3.7 million worth of cellophane. In 1950, it sold almost \$100 million worth. Cellophane was marketed as synonymous with cleanliness and it revolutionized food storage.

While most goods and products during the Depression were not selling, cellophane sales were soaring. In 1937, the material would be responsible for 10% of DuPont's revenue and 25% of its profit.

During WWII, cellophane was classified as an "essential material" used for the packaging of G. I. rations.

Cellulose film has been manufactured continuously since the mid-1930s and is still used today. When cellophane was used to wrap food in, bacteria could not get through the clear wrapping thus making it an important aid to food safety and it quickly became the wrapping of choice for food and cigarettes.

Charch spent the rest of his career at DuPont contributing to the development of Teflon and other chemical products known to us today. This timeline gives a snapshot into the long career of this nationally recognized chemist.

1929 Associate Director of the Rayon Chemical Division

1935 Director of the Rayon Pioneering Research Section

1940 received recognition from the National Association of Manufacturers for his industrial pioneering

In 1947, Charch established the Rayon's Textile Fibers Department's Pioneering Research Lab at the Experimental Station. He directed the development of Teflon, Orlon, Dacron and Lycra.

1949 Received an honorary doctor's degree from Miami University; Dr. Charch also received the Jacob F. Schoellkopf Medal for Scientific Achievement

In 1957 at a ceremony at Columbia University, William received the Charles Frederick Chandler Medal for his contributions to Chemistry.

At Miami University, the William Hale Charch Graduate Fellowships are awarded to graduate students based on accomplishment or potential in Chemistry and Biochemistry.

On July 13, 1958, William Hale Charch died in Chadds Ford, PA at the age of 60 from a stroke. He was eventually brought back home to Dayton and buried at Woodland Cemetery in Section 47 Lot 1661.





William Hale Charch will be inducted into the Dayton Region Walk of Fame on Tuesday, October 12, 2021 at a ceremony to be held at Sinclair Community College. Mr. Charch will be recognized for his achievement of inventing moisture-proof cellophane and for his contributions in the development of Teflon, Orlon, Dacron and Lycra while he worked at the Dupont Company.

For more information about the Dayton Region Walk of Fame and ticket availability for this year's induction ceremony, visit the website at daytonregionwalkoffame.org. You can also go there to learn more about the Walk of Fame, where it is located, who is on it and how you can submit a nomination for a worthy citizen from the Greater Miami Valley.

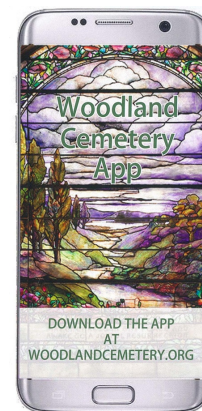
Join us for a Guided tour

Join us for a Fall [Tour at the Cemetery](#) before they go away! We have openings for guided tours to see the fall colors in the arboretum. Our Arboretum Tour is perfect for the tree enthusiast and our Historical Tour is perfect for the lover of history. Reservations are required and you can sign up by clicking [here](#).

You can take your own walking tour at the cemetery or a virtual tour from the comfort of your couch by visiting our website at: woodlandcemetery.org/tours.

From your phone you will be prompted to download our app. Take one of 12 walking tours we have available for your enjoyment at the cemetery. If you are on your desktop, laptop or tablet, you can take the tour right from the tour page. We will be adding more tours so come back often to learn about the men and women who made it Great in Dayton.

[Download the mobile app for your phone by clicking here.](#)



Memories of a loved one should last for generations.

Using our app, you can:

- Navigate to your relative or friend's grave using our GPS-based system
- Share stories about your family
- Upload photos and video
- Share memories with your family on Facebook

Your loved one's memorial page is automatically created when you make cemetery arrangements with our office. You may also share and upload information by using our burial database via our website (woodlandcemetery.org). (please contact our office if you need assistance)

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A Woodland Milestone

To help us celebrate our 180th Anniversary, make a donation of \$180 or more to the Arboretum Foundation now through December 31, 2021 and you will receive a set of Woodland ceramic coasters. Limit one set per household.

Donate on our secure website by clicking below or click on the check to receive a donation form to mail in.



**Click Here
Donate Now**



Did you receive our 12-page 180th Anniversary newsletter issue? If not, you can request a paper copy of the May 2021 issue of the *Woodland Wire* by [clicking here](#). In the message box, please request a "180 Newsletter" and give us your full name and mailing address.

This anniversary issue covers the history of Woodland from our beginning in 1841 to the building of the Mausoleum in 1969. A profile of the Cline Family, cemetery superintendents for 100 years, is the main feature. Updates on current cemetery activities are also included.