Creative Solarization

Brian Catterall

What is Solarization?

Solarization, or the Sabattier Effect, was discovered as a lucky fluke. In the 1920's Man Ray (né Emmanuel Radnitzky) was experimenting with different chemistries and processes for black and white photography. Why he decided that it might be a good idea to take the print from the developer and expose it to bright light and then continue developing the print is anyone's guess. The result of this crazy idea is the Sabattier Effect. Black and white are reversed.

The extent to which the tone reversal occurs is determined by how complete the development was before exposing the print to light and the duration of the exposure. Man Ray's finished prints varied from almost line drawings to complete negative film on print.

Man Ray: Rayographs and Solarization
https://www.inthein-between.com/man-ray-before-digital/

Technical Info
https://en.wikipedia.org/wiki/Sabattier_effect

Solarization Today

That was yesteryear in the wet darkroom. Today we use the digital darkroom,

There is no specific recipe for solarization. As you can see by studying Man Ray's and other photographer's work, many renderings are achievable. Although the Sabattier Effect applies only to B&W prints, many of the ideas can be translated to colour prints thanks to the advent of digital photography.

Applications

Personally, I use the Nik Collection software to experiment with solarization. Photoshop has similar tools. I presume Topaz, Luminar etc also have similar tools.

"Automatic" Black & White Solarization

Nik and Photoshop both offer "automatic" conversions.

Step 1: Convert to B&W:
- a) desaturate, or
- b) Nik Silver Efex or
- c) in Photoshop: Image / Mode / Grayscale

Step 2: Solarize:
- a) Nik Color Efex: Filter: Solarization or
- b) Photoshop: Filter / Stylize / Solarize

Fig 1: Original Photo – Dracula's Castle Bran, Romania

Fig 2: Nik Auto Solarization

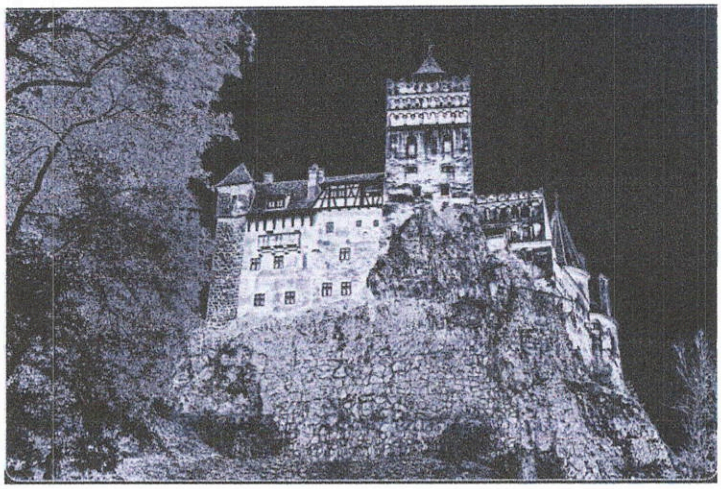
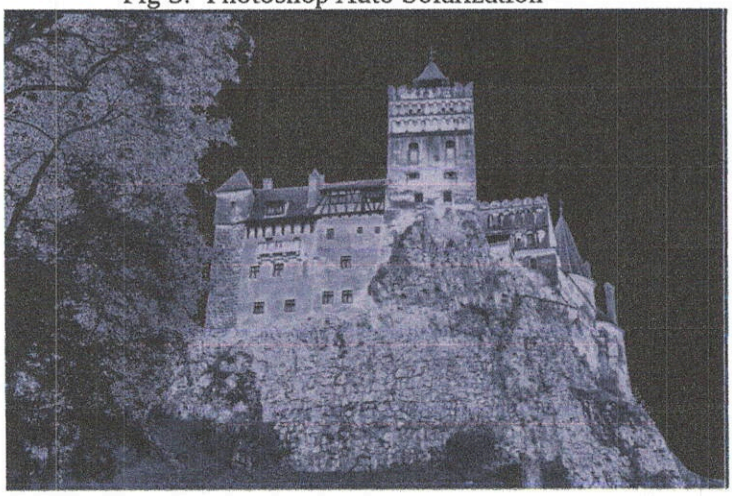


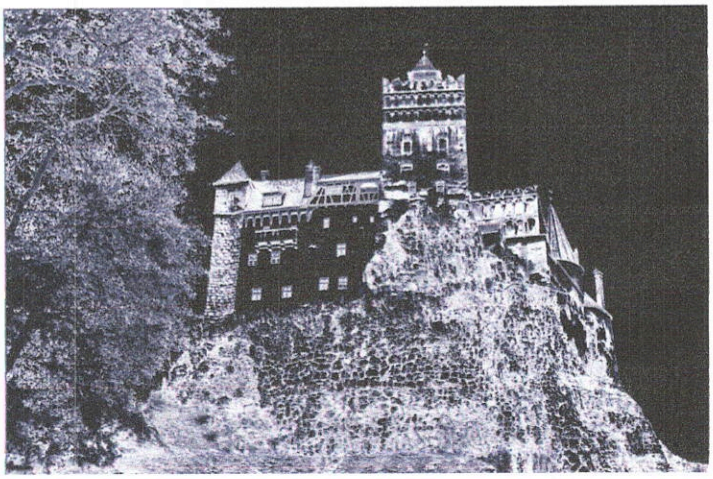
Fig 3: Photoshop Auto Solarization



As you can see, neither of these auto conversions results in a spectacular image. Adjustments can be made using the slides in Nik or Levels and Curves in Photoshop. The following image was made with two adjustments in the Color Efex solarization filter.

- Method 2
- Elapsed time 24%

Fig 4: – Fig 2 with Solarization Filter Adjustments



As you try various values for Method and Elapsed Time you will discover many different interpretations of your photo

Colour Solarization

Strictly speaking, solarization is a B&W film effect only. The effect is due to a much debated reaction(s(in the silver halide ions in the B&W film emulsion. The digital steps described above simulate the effect but, unlike in film, have not "changed" the underlying pixels in any way.

Nik, Photoshop and, most likely, other applications provide options to simulate the solarization effect on colour images. The following images provide an examples of how the changes to the default filter values in the Color Efex filter dramatically alters the image.

Fig 5: Graffiti, Brasov, Romania

Taking the image into Color Efex and applying the default Solarization filter yields the following result/

Fig 6: Applying the default Solarization Filter

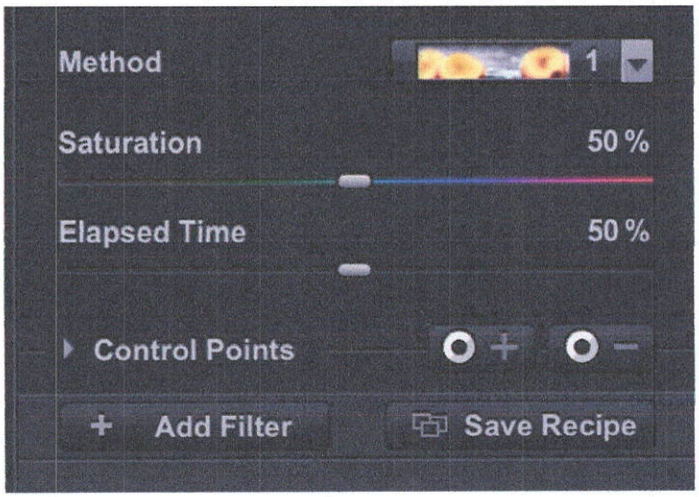
The result: a bit messy but definitely different!

Now the Fun Starts!!!!

Colour Solarization with Nik Color Efex

Color Efex has 3 adjustments that you can play with to get the desired effect you are after or like. I say "play" advisably as there is no way to predetermine the impact of adjustments to any of these,

Fig 7 Controls for the Solarization Filter



- Method: This drop down box has 6 different colour patterns and 6 B&W patterns to be used as the basis for the solarization
- Saturation: this slider is self evident and has the usual interpretation

- Elapsed Time: This is the slider that provides the greatest entertainment. When solarizing prints in the wet darkroom, the only variable one has is the amount of exposure that is given to the partially developed print. The solarization effect varies with exposure time. This slider replicates this effect and provides the most dramatic results.

\
The following are some examples of how these adjustment sliders can be used for effect.

Fig 8: Method 1, Saturation and Elapsed Time Unchanged

Fig 9: Method 6, Saturation 95%, Elapsed Time 43%

Fig 10: Method 2, Saturation 68%, Elapsed Time 55%

Fig 11: Method 3, Saturation 100%, Elapsed Time 39%

Fig 12: Method 5, Saturation 53%, Elapsed Time 68%

As you can see, the possibilities are endless. If that were not sufficient you can stack additional filters on top of solarization for added effect. The following image uses 3 filters as follows

- Solarization
  - Method 6
  - Saturation 31%
  - Elapsed Time 62%
- Low Key
  - Saturation 79%
  - Contrast 95%
- Photo Stylizer
  - Varitone
  - Style 2
  - Strength 43%

Fig 13: Multiple Filters

Note: Changing the order of the filters, even with the same slider values, will yield different end results

Colour Solarization with Photoshop

I haven't done much experimenting with colour solarization in Photoshop. The following link provides one way to accomplish it, there may be others.

https://photography.tutsplus.com/tutorials/quick-tip-using-adobe-photoshop-to-create-a-solarised-photograph--photo-5973

Step 5 onwards provide details of how to accomplish colour solarization. Personally, I prefer the result after Step 6a to his finished work.

The following You Tube illustrates another technique using Level and Curves layer masks.

https://www.youtube.com/watch?v=K8gLGbNBIDg

For me, I prefer the Nik Color Efex sliders as you get immediate feedback on the result.