

Chapter 1 : Gallery: The surreal and psychedelic art of infrared photography

Mr. Begleiter's The Art of Color Infrared Photography seems to be the only book on the subject of color infrared photography that is currently on the market, so if you are looking for guidance on the subject, this is it.

After spending more than a decade photographing exotic wildlife and tribes across the African continent, I suddenly hit a plateau. I was still extraordinarily passionate about my subjects, but I was desperate to rejuvenate my creative vision. Infrared photography became the tool that unleashed my creative block, adding an element of mystery, excitement and grandeur back into my photography. The results were wildly unexpected and pushed the boundaries of my artistic style. Reflected infrared IR light produces a fascinating array of surreal effects that differ vastly from that of the visible light spectrum. With its longer wavelength, infrared is just beyond the range we can detect with our eyes. Vegetation can appear nearly white, whereas skin can take on a milky, smooth, bluish tone. Colors are unpredictable; browns become blue, greens become reds, and reds become white. Cloudy blue skies take on a much more dramatic appearance. The world simply takes on a whole new style, adding an element of mystery, creating a desire to explore the familiar from an entirely unique and extraordinary perspective. I had been in awe of the infrared work of several photographers for many years, but I dragged my heels because of the constant warnings about all the challenges. Could I accept the focusing limitations, especially when I worked with moving subjects and usually have only one click of the shutter to capture the perfect moment? Did I have time for extra postprocessing work? I was careful to frame in the tree in the background to give a little more balance to the composition. The filter is very dark, requiring you to pre-focus before you attach the filter. You also lose up to eight stops of light, resulting in much longer exposures and requiring a tripod, which is fine for landscape photography, but would be impossible for capturing moving subjects. There are reliable companies such as LifePixel that can convert one of your older DSLRs by removing the traditional anti-aliasing filter and replacing it with one that permits IR light to pass through. This allows you to shoot as you normally do with your color digital camera. The most challenging part of converting a body is deciding on the type of conversion: I went with the Standard IR, as it allows me to create dynamic black-and-white and sepia images, with the ability to capture discreet touches of color, which I feel is the mystical element of IR. The composition and simplistic, almost nonexistent background grabbed my attention. Focusing Infrared Infrared light focuses differently than visible light. This causes a shift in focus to a point other than what we see through the lens. There are several ways to overcome this challenge: Calibrate your camera for the visible spectrum, and use the focus marks on your lens to correct the focus manually. Calibrate your camera and the lens you plan on using the most or a specific focal length for a zoom for infrared. Perhaps the best solution is to accept that soft focus can be part of the infrared artistic challenge, especially when photographing moving subjects. This was difficult to overcome, since I spend half of my time in the field as a wildlife photographer, in which one of the most important image qualities is a tack-sharp photograph, and you only have a few seconds to capture the action. However, I approached using IR with wildlife differently. My goal was to broaden my creative horizons, pushing myself to go beyond the paradigms with which I was familiar, to capture a more timeless, dramatic, artistic vision of exotic wildlife that are facing the threat of extinction. A fast click of the shutter, just as this male lion approached the female, captured a powerful moment. Exposure Considerations Hot spots are another inherent part of infrared photography, depending on the lens, and can be described as any area in the image that appears to be lighter or brighter than the rest of the image. This is because lenses are designed for visible light photography and the coating on the inside of the lens barrel can be reflective of IR light. Since IR contains no real colors, in a subtle sepia capture, you may find a slightly light blue spot in the middle of the frame. This is fairly easy to do in the menu section of your camera. Use green foliage in direct light as your target for setting white balance. Matrix metering or evaluative metering mode is the default metering mode on most digital cameras and is still the safe bet. Aperture, shutter speed and ISO combination will work with one another just as they do with your regular digital camera, but I find that IR is more sensitive to noise and recommend keeping a lower ISO. This portrait of a Cape buffalo was photographed in full light against the solid sky background. Infrared brought

out subtle color tones. Infrared Postprocessing The complexity of IR photography becomes more apparent in the processing of the IR file, but this is where the real art of infrared begins. However, it requires a higher skill level of technology and multiple software programs for the best results. It looks great in the back of the camera, but when you import your images into the editing software program, they pop back to a bright tonal pinkish-red. This will allow you to move the white balance sliders of temperature and tint past their respective current limitations of and , which is especially important for obtaining the subtlest colors in an IR image. The channel mixer in Photoshop is a must-have to switch color channels. I framed this image to isolate the elephants at play, using the dark foliage in the background to keep the viewer pushed toward the action. Nik Silver Efex part of the Google Nik Collection and now offered for free is a great plug-in when turning your photos into black-and-white or sepia images. Infrared Advice Some things to remember as you start out on your IR photographic journey: IR photography is an experimental process of discovery. The allure of this art is the surreal atmosphere and mystical appearance. You can shoot almost all day because the sun is the primary source of infrared light, working best when captured in direct sunlight or bright, open shade. Even through all the challenges, IR photography is an exciting alternative way of looking at the world that goes beyond the visible, with an explosion of self-expression that nurtures the creative soul. By nature, many of us resist change if we think it will be difficult. When we become stagnant in our art, we need to push forward and take some risk, to continue to push our creative curiosity beyond the ordinary. In a world inundated with millions of images, dramatic infrared photographs stand out from the crowd. Piper Mackay is a wildlife and cultural photographer. To see more of her work, read her blog and learn about upcoming photographic safari tours in Africa, Ethiopia and other destinations, visit pipermackayphotography.com.

Chapter 2 : NIR Colorâ€™Infrared Photography Software

Black and white infrared photography is a fascinating creative undertaking, but one that many shy away from because of the myths that surround handling and exposure of this special film.

Using an R72 infrared filter over the lens: This is a great solution to try out digital infrared photography. Steps to test your camera for IR sensitivity: Put your camera to manual mode Set the exposure to approximately 1 sec shutter speed and f10 Take a test shot of an infrared remote tv remote control , while pressing and holding any bottom on the remote. The brighter the dot, the more sensitive your camera is to infrared. Try different remotes, lenses, and cameras if you have them. Steps to photograph with R72 filter: Place you camera on a tripod to avoid motion blur. IR filter lets in very small amount of light so your exposure will be too long for hand held shooting. Focus prior to attaching the IR filter. Once desired focus is achieved switch to manual focus. Screw on your R72 filter Push the button. Take take the photo. Try various shutter speeds. Start with 15 seconds at f8, iso White Balance: If your camera offers a custom white balance preset, take a picture of a gray or white card with the filter on. Make sure that direct sunlight is hitting the card. Refer to your camera menu for how to set custom white balance. If everything is still coming out red, you will have to adjust the white balance in Adobe Camera RAW or any other raw editing software of your choice. This is probably the trickiest part when working with infrared filters. Another option of taking Infrared Images is to permanently convert your camera sensor to dedicated infrared. Converting your camera to dedicated Infrared. Permanently converting your camera to infrared is a great solution if you have an extra camera body. The procedure consists of removing the hot mirror filter directly from the sensor and replacing it with clear or custom infrared filter. The main advantage of having your camera converted vs. You can have your camera professionally converted at Life Pixel Conversion Service. This tutorial was brought to you by our regular contributor Evan Sharboneau. Evan has published a pretty cool eBook: Can you share your tips for taking infrared shot? Try this tutorial and post your shots for review use share your shot link in comments box. Two humble guys trying to keep you educated and entertained.

Chapter 3 : 5 Creative Ways to Process Infrared Photographs in Photoshop

Get this from a library! The art of color infrared photography. [Steven H Begleiter] -- Demystifying the elusive art of creating color infrared images, this guide offers in-depth techniques to capture light beyond the visible spectrum with color infrared film.

History[edit] Until the early 20th century, infrared photography was not possible because silver halide emulsions are not sensitive to longer wavelengths than that of blue light and to a lesser extent, green light without the addition of a dye to act as a color sensitizer. Wood , who discovered the unusual effects that now bear his name. Mees also took a few infrared photographs in Portugal in , which are now in the Kodak archives. Infrared-sensitive photographic plates were developed in the United States during World War I for spectroscopic analysis, and infrared sensitizing dyes were investigated for improved haze penetration in aerial photography. The Times regularly published landscape and aerial photographs taken by their staff photographers using Ilford infrared film. By 33 kinds of infrared film were available from five manufacturers including Agfa , Kodak and Ilford. The first version of this, known as Kodacolor Aero-Reversal-Film, was developed by Clark and others at the Kodak for camouflage detection in the s. Infrared photography became popular with a number of s recording artists, because of the unusual results; Jimi Hendrix , Donovan , Frank Zappa and the Grateful Dead all issued albums with infrared cover photos. The unexpected colors and effects that infrared film can produce fit well with the psychedelic aesthetic that emerged in the late s. Infrared light has a range of wavelengths, just like visible light has wavelengths that range from red light to violet. The longer, far infrared wavelengths are about the size of a pin head and the shorter, near infrared ones are the size of cells, or are microscopic. When a single-lens reflex SLR camera is fitted with a filter that is opaque to visible light, the reflex system becomes useless for both framing and focusing, one must compose the picture without the filter and then attach the filter. This requires the use of a tripod to prevent the composition from changing. However, it should be noted that diffraction effects inside a camera are greater at infrared wavelengths so that stopping down the lens too far may actually reduce sharpness. Catadioptric lenses do not often require this adjustment because their mirror containing elements do not suffer from chromatic aberration and so the overall aberration is comparably less. Catadioptric lenses do, of course, still contain lenses, and these lenses do still have a dispersive property. Some lens manufacturers such as Leica never put IR index marks on their lenses. The reason for this is that any index mark is only valid for one particular IR filter and film combination, and may lead to user error. Even when using lenses with index marks, focus testing is advisable as there may be a large difference between the index mark and the subject plane. Film Cameras[edit] Infrared negatives fogged by the frame counter of a Minolta Maxxum 4. View of the Hollywood Hills. Kodak Infrared color slide film, 35mm manual focus Nikon lens no filter used and developed with E-6 process. Many conventional cameras can be used for infrared photography, where infrared is taken to mean light of a wavelength only slightly longer than that of visible light. Photography of rather longer wavelengths is normally termed thermography and requires special equipment. With some patience and ingenuity, most film cameras can be used. However, some cameras of the s that used 35mm film have infrared sprocket-hole sensors that can fog infrared film their manuals may warn against the use of infrared film for this reason. Other film cameras are not completely opaque to infrared light. The notable halation effect or glow often seen in the highlights of infrared photographs is an artifact of Kodak High Speed Infrared HIE black-and-white negative film and not an artifact of infrared light. The glow or blooming is caused by the absence of an anti-halation layer on the back side of Kodak HIE film, this results in a scattering or blooming around the highlights that would usually be absorbed by the anti-halation layer in conventional films. The intent of filters in black-and-white infrared photography is to block blue wavelengths and allow infrared to pass through. Without filters, infrared negative films look much like conventional negative films because the blue sensitivity lowers the contrast and effectively counteracts the infrared look of the film. Some photographers use orange or red filters to allow slight amounts of blue wavelengths to reach the film, and thus lower the contrast. Very dark-red 29 filters block out almost all blue, and visually opaque 70, 89b, 87c, 72 filters block out all blue and

also visible red wavelengths, resulting in a more pure-infrared photo with a more pronounced contrast. Certain infrared-sensitive films like Kodak HIE must only be loaded and unloaded in total darkness. Arguably the greatest obstacle to infrared film photography has been the increasing difficulty of obtaining infrared-sensitive film. Color infrared transparency films have three sensitized layers that, because of the way the dyes are coupled to these layers, reproduce infrared as red, red as green, and green as blue. All three layers are sensitive to blue so the film must be used with a yellow filter, since this will block blue light but allow the remaining colors to reach the film. Early color infrared films were developed in the older E-4 process, but Kodak later manufactured a color transparency film that could be developed in standard E-6 chemistry, although more accurate results were obtained by developing using the AR-5 process. In general, color infrared does not need to be refocused to the infrared index mark on the lens. Since, all formats of color infrared film have been discontinued. Specifically, Aerochrome and SO There is no currently available digital camera that will directly produce the same results as Kodak color infrared film although the equivalent images can be produced by taking two exposures, one infrared and the other full-color, and combining in post-production. A yellow minus-blue filter can also be used, which provides a single image that can also be post-processed to emulate the Ektachrome look. The colors result from varying amounts of infrared passing through the color filters on the photo sites, further amended by the Bayer filtering. While this makes such images unsuitable for the kind of applications for which the film was used, such as remote sensing of plant health, the resulting color tonality has proved popular artistically. Color digital infrared, as part of full spectrum photography is gaining popularity. The ease of creating a softly colored photo with infrared characteristics has found interest among hobbyists and professionals. All Aerochrome medium and large format which exists today came directly from his lab. The trend in infrared photography continues to gain momentum with the success of photographer Richard Mosse and multiple users all around the world. Digital camera sensors are inherently sensitive to infrared light, [17] which would interfere with the normal photography by confusing the autofocus calculations or softening the image because infrared light is focused differently from visible light, or oversaturating the red channel. Also, some clothing is transparent in the infrared, leading to unintended at least to the manufacturer uses of video cameras. However, for some subject matter the long exposure does not matter or the motion blur effects actually add to the image. An example of color digital infrared photography. Red and blue channels have been swapped for more conventional sky color. An alternative method of DSLR infrared photography is to remove the infrared blocker in front of the sensor and replace it with a filter that removes visible light. This filter is behind the mirror, so the camera can be used normally - handheld, normal shutter speeds, normal composition through the viewfinder, and focus, all work like a normal camera. Metering works but is not always accurate because of the difference between visible and infrared refraction. Additionally, because the red, green and blue micro-filters remain and have transmissions not only in their respective color but also in the infrared, enhanced infrared color may be recorded. An alternative approach is to use a Foveon X3 sensor, which does not have absorptive filters on it; the Sigma SD10 DSLR has a removable IR blocking filter and dust protector, which can be simply omitted or replaced by a deep red or complete visible light blocking filter. The result is a very sensitive digital IR camera. A Nikau palm against a clear, sunny sky shows the high contrast that is often typical of outdoors infrared photography. While it is common to use a filter that blocks almost all visible light, the wavelength sensitivity of a digital camera without internal infrared blocking is such that a variety of artistic results can be obtained with more conventional filtration. For example, a very dark neutral density filter can be used such as the Hoya ND which passes a very small amount of visible light compared to the near-infrared it allows through. Wider filtration permits an SLR viewfinder to be used and also passes more varied color information to the sensor without necessarily reducing the Wood effect. Wider filtration is however likely to reduce other infrared artefacts such as haze penetration and darkened skies. This technique mirrors the methods used by infrared film photographers where black-and-white infrared film was often used with a deep red filter rather than a visually opaque one. Another common technique with near-infrared filters is to swap blue and red channels in software. Nightshot infrared photography of a stove with nm red-filter and polarizing filter at daylight. Several Sony cameras had the so-called Night Shot facility, which physically moves the blocking filter away from the light

path, which makes the cameras very sensitive to infrared light. The reverse of the United States five-dollar bill has two rectangular strips that are blanked out when viewed in the infrared spectrum, as seen in this image taken by an infrared camera. Fuji have produced digital cameras for use in forensic criminology and medicine which have no infrared blocking filter. Optimum UV sensitivity requires special lenses, but ordinary lenses usually work well for IR. FujiFilm restricts the sale of these cameras to professional users with their EULA specifically prohibiting "unethical photographic conduct". They may be multispectral and use a variety of technologies which may not resemble common camera or filter designs. Cameras sensitive to longer infrared wavelengths including those used in infrared astronomy often require cooling to reduce thermally induced dark currents in the sensor see Dark current physics. Lower cost uncooled thermographic digital cameras operate in the Long Wave infrared band see Thermographic camera Uncooled infrared detectors. These cameras are generally used for building inspection or preventative maintenance but can be used for artistic pursuits as well, such as this image of a cup of coffee. See also[edit] Digital infrared using a 50mm lens, D and the program Exposure. Infrared photography typically produces false-color artifacts, such as turning greens into pinks and purples as shown in this example.

Chapter 4 : How to do Surreal Digital Infrared Photography Without Expensive Gear or Camera Conversion

infrared images over the visible photo. Registration is the term used in imaging science to indicate the process of transforming an image in order to overlap a.

Light-field camera Digital methods of image capture and display processing have enabled the new technology of "light field photography" also known as synthetic aperture photography. This process allows focusing at various depths of field to be selected after the photograph has been captured. These additional vector attributes can be captured optically through the use of microlenses at each pixel point within the 2-dimensional image sensor. Every pixel of the final image is actually a selection from each sub-array located under each microlens, as identified by a post-image capture focus algorithm. Devices other than cameras can be used to record images. Trichome of *Arabidopsis thaliana* seen via scanning electron microscope. Note that image has been edited by adding colors to clarify structure or to add an aesthetic effect. Heiti Paves from Tallinn University of Technology. Other[edit] Besides the camera, other methods of forming images with light are available. For instance, a photocopy or xerography machine forms permanent images but uses the transfer of static electrical charges rather than photographic medium, hence the term electrophotography. Photograms are images produced by the shadows of objects cast on the photographic paper, without the use of a camera. Objects can also be placed directly on the glass of an image scanner to produce digital pictures. The quality of some amateur work is comparable to that of many professionals and may be highly specialized or eclectic in choice of subjects. Amateur photography is often pre-eminent in photographic subjects which have little prospect of commercial use or reward. Amateur photography grew during the late 19th century due to the popularization of the hand-held camera. Good pictures can now be taken with a cell phone which is a key tool for making photography more accessible to everyone. Indianapolis as a panorama and a modified fisheye image by an amateur photographer with image editing software Downtown Indianapolis in a large panorama image The same image but modified with a fisheye lens -style technique into a circle Commercial[edit] Example of a studio-made food photograph. Commercial photography is probably best defined as any photography for which the photographer is paid for images rather than works of art. In this light, money could be paid for the subject of the photograph or the photograph itself. Wholesale, retail, and professional uses of photography would fall under this definition. The commercial photographic world could include: These images, such as packshots , are generally done with an advertising agency , design firm or with an in-house corporate design team. Fashion and glamour photography usually incorporates models and is a form of advertising photography. Models in glamour photography sometimes work nude. Concert photography focuses on capturing candid images of both the artist or band as well as the atmosphere including the crowd. Many of these photographers work freelance and are contracted through an artist or their management to cover a specific show. Concert photographs are often used to promote the artist or band in addition to the venue. Crime scene photography consists of photographing scenes of crime such as robberies and murders. A black and white camera or an infrared camera may be used to capture specific details. Still life photography usually depicts inanimate subject matter, typically commonplace objects which may be either natural or man-made. Still life is a broader category for food and some natural photography and can be used for advertising purposes. Food photography can be used for editorial, packaging or advertising use. Food photography is similar to still life photography but requires some special skills. Editorial photography illustrates a story or idea within the context of a magazine. These are usually assigned by the magazine and encompass fashion and glamour photography features. Photojournalism can be considered a subset of editorial photography. Photographs made in this context are accepted as a documentation of a news story. Portrait and wedding photography: Landscape photography depicts locations. Wildlife photography demonstrates the life of animals. Paparazzi is a form of photojournalism in which the photographer captures candid images of athletes, celebrities, politicians, and other prominent people. Pet photography involves several aspects that are similar to traditional studio portraits. Landscape degree panoramic picture of the Chajnantor plateau in the Atacama Desert , Chile. In the center is Cerro Chajnantor itself. Magazines and newspapers, companies putting up Web

sites, advertising agencies and other groups pay for photography. Many people take photographs for commercial purposes. Organizations with a budget and a need for photography have several options: Photo stock can be procured through traditional stock giants, such as Getty Images or Corbis ; smaller microstock agencies, such as Fotolia ; or web marketplaces, such as Cutcaster. Classic Alfred Stieglitz photograph, *The Steerage* shows unique aesthetic of black-and-white photos. During the 20th century, both fine art photography and documentary photography became accepted by the English-speaking art world and the gallery system. Holland Day , and Edward Weston , spent their lives advocating for photography as a fine art. At first, fine art photographers tried to imitate painting styles. The aesthetics of photography is a matter that continues to be discussed regularly, especially in artistic circles. Many artists argued that photography was the mechanical reproduction of an image. If photography is authentically art, then photography in the context of art would need redefinition, such as determining what component of a photograph makes it beautiful to the viewer. Clive Bell in his classic essay *Art* states that only "significant form" can distinguish art from what is not art. There must be some one quality without which a work of art cannot exist; possessing which, in the least degree, no work is altogether worthless. What is this quality? What quality is shared by all objects that provoke our aesthetic emotions? What quality is common to Sta. In each, lines and colors combined in a particular way, certain forms and relations of forms, stir our aesthetic emotions. Even though what is depicted in the photographs are real objects, the subject is strictly abstract. Photojournalism Photojournalism is a particular form of photography the collecting, editing, and presenting of news material for publication or broadcast that employs images in order to tell a news story. It is now usually understood to refer only to still images, but in some cases the term also refers to video used in broadcast journalism. Photojournalism is distinguished from other close branches of photography e. Photojournalists create pictures that contribute to the news media, and help communities connect with one other. Photojournalists must be well informed and knowledgeable about events happening right outside their door. They deliver news in a creative format that is not only informative, but also entertaining. Science and forensics[edit] Wootton bridge collapse in The camera has a long and distinguished history as a means of recording scientific phenomena from the first use by Daguerre and Fox-Talbot, such as astronomical events eclipses for example , small creatures and plants when the camera was attached to the eyepiece of microscopes in photomicroscopy and for macro photography of larger specimens. The camera also proved useful in recording crime scenes and the scenes of accidents, such as the Wootton bridge collapse in The methods used in analysing photographs for use in legal cases are collectively known as forensic photography. Crime scene photos are taken from three vantage point. The vantage points are overview, mid-range, and close-up. Different machines produced or hour photographic traces of the minute-by-minute variations of atmospheric pressure , temperature, humidity , atmospheric electricity , and the three components of geomagnetic forces. The cameras were supplied to numerous observatories around the world and some remained in use until well into the 20th century. X-Ray machines are similar in design to Pin Hole cameras with high-grade filters and laser radiation. The method has been much extended by using other wavelengths, such as infrared photography and ultraviolet photography , as well as spectroscopy. Those methods were first used in the Victorian era and improved much further since that time. They used an electric field to trap an "Ion" of the element, Ytterbium. The image was recorded on a CCD, an electronic photographic film. While photo manipulation was often frowned upon at first, it was eventually used to great extent to produce artistic effects. There are many ongoing questions about different aspects of photography. In her writing " On Photography " , Susan Sontag discusses concerns about the objectivity of photography. This is a highly debated subject within the photographic community. Along these lines, it can be argued that photography is a subjective form of representation. Modern photography has raised a number of concerns on its effect on society.

Chapter 5 : The Art of Color Infrared Photography by Steven Begleiter

Infrared photography is a view of the usual world in a new and totally fascinating way. This style is more of a challenge to create and process well, but I enjoy that. The most notable hallmark of infrared shooting is green foliage goes white, and blue skies and water go black.

Digital cameras have made the process of infrared photography relatively simple and very accessible, compared to the days of shooting with infrared film. Here are 5 creative ways to process your digital infrared images in Photoshop to create arresting photos in color, and Black and White. Look at the difference this one click makes! In fact Auto Tone should be the first thing you do to all your infrared images. Same image after Auto Tone has been applied This has become a perfectly delightful infrared image. It has a variety of textures and colors for interest. However you may want to further process it to add more WOW and impact. The next step adds a few more tweaks that will help you do this. You can also adjust the opacity of this gradient layer. If you are familiar with layer masks , you may want to mask out any areas where the gradient might be too strong. Here is the same image with the Gradient Layer added. Can you see how it adds a little more depth and drama? I find it quicker to use the icon in this case. While this new layer is active, go to the Tools palette and select the Gradient tool. Now, back on your layer, drag your mouse to get the gradient on your image. Select the blending mode to soft light or hard light and then adjust the opacity. This is where your artistic eye comes into the picture. Play around with these settings until you have something you like. Here is another infrared image processed the same way. This is usually the grass and foliage in your scene, or it could be buildings or other subjects that reflect infrared light because of their paint or construction materials. Happily, in Photoshop you can give a tonal boost to your images in a couple of ways, in addition to the Auto Tone setting. If your image is not a RAW file you can still use these adjustments, although it is best to shoot RAW when capturing infrared photos. Original image as shot: Notice how these adjustments bring out the red in the sky and the blue in the leaves. Your Channel Mixer will look like this: Your image will look something like this: There is a clear color difference now between the blue sky and the red foliage. Now the last part. Go back into your Raw Filters, and in the Basic panel, move the White Balance Color Temperature slider to the left to get a nice blue sky. Your image should have a blue sky and white leaves and grass. For best results your image should have a clear sky with some clouds for effect. Overcast skies detract from the image, leave things without enough contrast, and very flat. No clouds make the sky seem like a vast black void – not too interesting. Classic black and white infrared images tend to be non-contrasty, so from an artistic perspective a blue sky with wispy or puffy clouds can really add interest to your image, create a powerful story, and keep that soft contrast intact. To be sure, a simple way to set this is to hit the letter D to reset the colors to the default state. You will have to adjust these to suit your image but it will create the classic graininess and glow of film infrared photos. A little experimentation goes a long way. Remember your History palette in case you want to go back a few steps. Color Balance provides an addition method of doing this – in Black and White processing, as well as for color. Can you see why? I love the softness and translucency of Black and White, infrared photography. Post-processing really brings out all the infrared characteristics that draw viewers in, and gets the emotions flowing. Using these five processing techniques will get you off to a fine start, but these are only five of many ways you can process your digital infrared images in Photoshop. Post your infrared shots too.

Chapter 6 : NIR Color on the App Store

"The Art of Color Infrared Photography will open the doors to an entirely new and exciting photographic world. This exhaustive new book will show you how to choose the best light sources for color infrared, how to pre-visualize the scene and how to get the images you want."-the publisher.

But back in the days of film photography, shooting infrared was complicated, expensive and the results were often not great. But now the complexity of capturing infrared photos has changed – digital cameras have made the technique almost foolproof, inexpensive, and a lot of fun! Visible Light Black and White Image Just know that anything that is alive will reflect a greater amount of infrared light than inanimate objects. Leaves, foliage, and grass, along with skin, reflect the greatest amounts of infrared light, and so will be the whitest objects in your image. The tonality is very different from that of visible light black and white photography though. Notice how the tones of the leaves, seeds and sky are quite different in the infrared image below. Digital Infrared Image Okay, are you ready to give this a try? Here are the simple steps you need to follow so your images will turn out into hauntingly beautiful, surreal infrared photographs. The first steps deal with equipment and settings, and the last steps are all about how to best capture beautiful infrared light. In fact the newer the camera, the less sensitive to infrared light it may be. Try this simple test to see if your camera will give you good results. Testing your camera for infrared sensitivity. This is the transmitter that sends the signal from the remote to your device. That signal usually uses infrared light. You can see that it is invisible light i. But just wait until you do this looking through your camera! If you see the bulb light up, your camera can see infrared light. The whiter and brighter the light you see from the remote, the more sensitive your camera is to infrared. If the light is more purple or red your camera may not be a good candidate for shooting infrared photos. The tripod will help you take a sharp shot, as your exposure times will be quite long. If you are using a slide in filter system, such as Cokin or Lee, they also make infrared filters to work with their holders. The R72 refers to the amount and type of infrared light that passes through to your sensor and I recommend using this to start. It allows some visible light to pass to the sensor so it will allow you to do all sorts of creative post processing with your images. Infrared Image with creative post-processing Step 3: Set up your camera on your tripod and make these adjustments: You can also bracket manually. Shooting in RAW will give you a bit more latitude for processing and adjusting. Bracketing will help you find the sweet spot for exposure at your preferred aperture and ISO. But for now set your White Balance to the Sunny or Daylight preset. Composition Just as in regular light photography, composition is a critical component of infrared photography. However there are a few additional considerations to keep foremost in your mind when planning your infrared composition. A variety of textures make the image more dynamic. Infrared photography is similar to black and white photography, in that you are dealing with a limited number of tones. To add more dynamism and energy to your infrared shots, add contrasting elements. By this I mean using dark and light objects in close proximity to each other. But also use smooth and textured objects together. You can mix and match for artistic composition and design.

Chapter 7 : Exploring Infrared Photography To Rejuvenate Your Creative Vision

This exhaustive new book will show you how to choose the best light sources for color infrared, how to previsualize the scene and how to get the images you want. The best Midwestern source for everything photographic and imaging, including rentals and a professional photo lab.

Chapter 8 : Photography - Wikipedia

*One of the most charming contrasting color effects you can get in photography is by using ****infrared****. An easy way to understand near-infrared light is to think of it as the color of the rainbow next to red, a color that is invisible to the human eye.*

Chapter 9 : Infrared photography - Wikipedia

The result is "color-infrared" photography. The electromagnetic spectrum is the scientific term for the collective types of light and energy emitted from the Sun. The part of the spectrum visible to the human eye is the normal rainbow of colors we see every day.