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PHOTOGRAPHIC PRODUCTS AND PROCESSES

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13 Claims. (Cl. 96—29)

This application is in part a continuation of my copending application Serial No. 748,421, filed July 14, 1958 (now U.S. Patent No. 2,983,606, issued May 9, 1961), which application, in turn, is in part a continuation of my application, Serial No. 415,073, filed March 9, 1954 (now abandoned).

This invention relates to the art of photography and, more particularly, to processes for the formation of color images and to products useful in performing such processes.

A primary object of this invention is to provide novel photographic processes and products for forming transfer images which are negative, i.e., nonreversed, images with respect to the image developed in the exposed photosensitive element.

A further object of this invention is to provide novel photographic processes and products wherein oxidation of a silver halide developing agent by development of exposed silver halide results in the formation of a colored, diffusible oxidation product, which colored oxidation product is transferred, by diffusion, to an image-receiving layer to provide a negative color transfer image.

Still another object of this invention is to provide novel processes and products useful in the formation of color transfer images, wherein a dye developer is oxidized in developed areas of the exposed silver halide emulsion and a diffusible colored product of the oxidation of said dye developer is transferred, by imbibition, to an image-receiving layer in superposed relationship with said silver halide emulsion.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the several steps and the relation and order of one or more of such steps with respect to each of the others, and the product possessing the features, properties and the relation of elements which are exemplified in the following detailed disclosure, and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description.

The photographic processes and products disclosed herein are particularly concerned with the development of an exposed silver halide emulsion to form, by diffusion transfer processing, a color transfer image which is a negative image of the photographed image.

A number of diffusion transfer processes have been disclosed wherein the development of an exposed silver halide emulsion is utilized to render a color-providing substance nondiffusible from the developed areas, whereby a positive color transfer image is obtained. In such processes the unreacted color-providing substance present in undeveloped areas of the silver halide emulsion is transferred, by diffusion, to provide the desired positive transfer image.

The processes disclosed herein, however, form color transfer images by transferring a colored product of the oxidation of a color-providing substances in the developed areas, thereby forming a negative color transfer image.

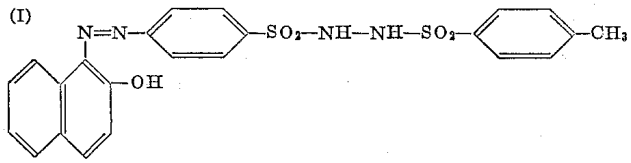
As used herein, the expression "negative transfer image" refers to the fact that the transfer image is nonreversed with respect to the developed areas of the exposed silver halide emulsion. While in most instances, the color transfer images obtained in accordance with this invention would be negative images with respect to the photographed subject matter, transfer images positive in character with reference to the photographed subject matter may be obtained by employing silver halide emulsions of the type generally referred to in the photographic art as direct positive emulsions. One such silver halide emulsion, which may be processed to form a positive transfer image in accordance with this invention, is a so-called internal latent image emulsion, wherein processing in the presence of a fogging agent results in development of the unexposed silver halide areas instead of development of the exposed areas, as is well known in the art. It will therefore be understood that while the invention is described in terms of a negative transfer image, that such references to "negative" transfer images should be construed to include transfer images which are in fact positive with reference to the photographed subject matter as here indicated.

The objects of this invention may be accomplished by developing, in the presence of a silver halide developing agent which provides, as a result of oxidation as a function of development, a reaction or oxidation product which is colored and which is preferentially transferable, by diffusion, to a superposed image-receiving layer. In the preferred embodiment, this diffusible oxidation product is colored and is utilized to form the color transfer image without further reaction. In some instances, however, the transferred oxidation product may undergo a further reaction to deepen or shift its color, as by coupling with an oxidized color developer or with a diazonium salt. Such latter reagents may be initially contained in the image-receiving layer or may be applied thereto after transfer of the colored oxidation product has been effected, e.g., by swabbing the image-receiving layer after it has been separated from the silver halide emulsion layer.

In accordance with this invention, an oxidation product of a silver halide developing agent is obtained which product is preferentially diffusible with respect to the unoxidized portions of said silver halide developing agent. One such embodiment, and a preferred embodiment, involves the use of a silver halide developing agent which is also a dye and which yields an oxidation product which is more diffusible than the unoxidized portion thereof. As an example of a silver halide developing agent which is also a dye and which provides a more diffusible oxidation product, mention may be made of compounds of this type which, upon oxidation, provide a colored oxidation product having a lower molecular weight and soluble in the processing composition. Compounds of this type undergo a "splitting" reaction whereby a portion of the molecule is removed or "split off," thereby providing a "smaller" molecule as an oxidation product. The resulting oxidation product is soluble in the processing composition employed and, being more diffusible than the unoxidized compound, is preferentially transferred to form the nega-

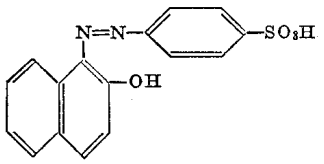
tive transfer image. An example of such a compound is a bis-sulfonyl hydrazide which is also a dye, e.g.:

(I)



Development of an exposed silver halide emulsion with this developing agent results in the oxidation of the hydrazide grouping, whereby the molecule is split and a more soluble and more diffusible oxidation product, believed to have the structure:

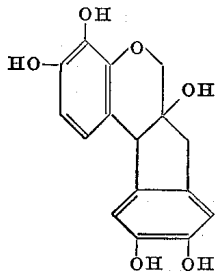
(II)



is formed. This oxidation product is more diffusible than the unoxidized compound and is preferentially transferred, by diffusion, to provide the desired negative transfer image.

In another embodiment of this invention, the silver halide developing agent is substantially colorless in its reduced or unreacted form, but forms a colored, diffusible oxidation product. This colored oxidation product is transferred to provide the desired negative transfer image. As an example of such a colorless silver halide developing agent, mention may be made of haematoxylin:

(III)



By way of recapitulation, it has been discovered that negative color transfer images may be obtained by use of silver halide developing agents which, upon oxidation, yield an oxidation product which is colored and which also is more mobile than the unoxidized silver halide developing agent, the colored, more mobile oxidation product being transferred, by diffusion, to a superposed image-receiving layer to provide a negative transfer image. This silver halide developing agent may be colored or colorless in its reduced or unreacted form; if it is colored in the reduced form, the color of the more mobile, colored oxidation product may be the same as, or different from, the color of the reduced form.

Silver halide developing agents useful in carrying out the processes of this invention will be referred to herein, for convenience, as "negative transferring developing agents."

In carrying out the processes of this invention, a photosensitive element containing a silver halide emulsion is exposed and wetted with a liquid processing composition, for example, by immersing, coating, spraying, flowing, etc., in the dark, and the photosensitive element superposed, prior to, during or after wetting, on a sheetlike support element, which may be utilized as an image-receiving element. In a preferred embodiment, the photosensitive element contains a layer of a "negative transferring developing agent," and the liquid processing composition is applied to the photosensitive element in a uniform layer as the photosensitive element is brought into superposed position with an image-receiving element. It is also within the scope of this invention to apply the liquid processing composition prior to exposure, in accordance with the disclosure in the copending application of Edwin H. Land, Serial No. 498,672, filed April 1, 1955. The liquid processing composition permeates the emulsion to provide a solution of the negative transferring developing agent substantially uniformly distributed therein. As the exposed silver halide emulsion is developed, the negative transferring developing agent is oxidized in developed areas, thereby providing an imagewise distribution of a more mobile, colored oxidation product dissolved in the liquid processing composition. This colored oxidation product is more diffusible than the unoxidized negative transferring developing agent; this difference in diffusibility is due, at least in part, to a difference in their respective solubilities, especially as regards their solubility in alkaline solutions. At least part of this imagewise distribution of more mobile oxidation product is transferred, by imbibition, to a superposed image-receiving layer or element to form a negative transfer image. Under certain circumstances, the layer of the liquid processing composition may be utilized as the image-receiving layer. The image-receiving layer receives a depthwise diffusion, from the emulsion, of the more mobile oxidation product without appreciably disturbing the imagewise distribution thereof to provide a negative colored image. The image-receiving element may contain agents adapted to mordant or otherwise fix the transferred oxidation product. If the color of the transferred oxidation product is affected by changes in the pH of the image-receiving element, this pH may be adjusted in accordance with well-known techniques to provide a pH affording the desired color. Imbibition periods of approximately one minute have been found to give good results, but this contact period may be adjusted where necessary to compensate for variations in temperature or other conditions. The desired negative image is revealed by separating the image-receiving layer from the photosensitive emulsion at the end of the imbibition period.

The negative transferring developing agents of this invention may be utilized in the photosensitive element, for example, in, on or behind the silver halide emulsion, or they may be utilized in the image-receiving element or in the liquid processing composition. In a preferred embodiment, a coating or layer of the negative-transferring developing agent is placed behind the silver halide emulsion, i.e., on the side of the emulsion adapted to be located most distant from the photographed subject when the emulsion is exposed and preferably also adapted to be most distant from the image-receiving element when in superposed relationship therewith. Placing the negative transferring developing agent behind the emulsion layer, as in the preferred embodiment, has the advantage of providing increased contrast in the transfer image, and also minimizes any light-filtering action by a colored negative transferring developing agent. In this preferred embodiment, the layer containing the negative transferring developing agent may be applied by using a coating solution containing about 0.5–8%, by weight, of said developing agent. Similar concentrations may be used if the negative transferring developing agent is utilized as a component of the liquid processing composition.

The liquid processing composition above referred to comprises at least an aqueous solution of an alkaline compound, for example, diethylamine, sodium hydroxide or sodium carbonate, and may contain the negative transferring developing agent. In some instances, it may contain a silver halide developing agent which is substantially colorless and which does not contribute any significant amount of color to the transfer image. If the liquid processing composition is to be applied to the emulsion by being spread thereon, preferably in a relatively thin, uniform layer, it may also include a viscosity-increasing compound constituting the film-forming material of the type which, when said composition is spread and dried, will form a relatively firm and relatively stable film. A preferred film-forming material is a high molecular weight polymer such as a polymeric, water soluble ether

inert to an alkali solution, as, for example, a hydroxyethyl cellulose or sodium carboxymethyl cellulose. Other film-forming materials or thickening agents whose ability to increase viscosity is substantially unaffected when left in solution for a long period of time may also be used.

In the practice of this invention, the negative transferring developing agents preferably are selected for their ability to provide mobile oxidation products of colors useful in carrying out subtractive color photography. Negative transferring developing agents are utilizable individually to provide individual cyan, magenta and yellow, as well as black, negative transfer images. Appropriate colored negative transfer images of the three subtractive colors may be formed, in a manner similar to that disclosed in U.S. Patent No. 2,647,049, by use of appropriate negative transferring developing agents and individual image-receiving layers which, after image formation, are mounted in superposed and registered relationship to provide a negative multicolor image, or the individual transfer images may be successively formed in registered relationship on a single image-receiving element. The present invention also includes the use of a mixture of negative transferring developing agents in such proportion that the colors of their respective more mobile, colored oxidation products add up to black, whereby a black-and-white negative transfer image is obtained.

Furthermore, negative transferring developing agents of the nature with which this invention is concerned are useful in light-sensitive elemental portions of minute size which are mounted on a suitable support in a color screen pattern and which are individually exposable whereby a multicolor negative transfer image may be obtained on an image-receiving layer. Suitable film structures for carrying out this embodiment of the invention are disclosed in U.S. Patent No. 2,968,554, issued to Edwin H. Land on January 17, 1961, and in my copending U.S. application, Serial No. 577,711, filed August 12, 1956. Multicolor negative transfer images also may be obtained by the use of an integral, multilayer negative; suitable film structures of this type are disclosed in the copending U.S. application of Edwin H. Land and Howard G. Rogers, Serial No. 565,135, filed February 13, 1956, and also in Example 1 of my copending U.S. application, Serial No. 748,421, filed July 14, 1958 (of which this application is a continuation-in-part). As disclosed therein, particularly useful interlayers in such multilayer negatives include gelatin and polyvinyl alcohol. In addition to, or instead of, an interlayer comprising gelatin or polyvinyl alcohol, a barrier layer, e.g., a layer comprising a mixture of cellulose acetate and cellulose acetate hydrogen phthalate, may be present in such multilayer negatives.

In all products employed in the practice of the invention, it is preferable to expose the negative material or photosensitive element from the emulsion side. It is therefore desirable to hold the photosensitive element and the image-receiving element or positive sheet together at one end thereof by suitable means, e.g., hinges, staples, or the like, in such manner that the photosensitive element and the positive element may be spread apart during exposure. The processing composition is preferably contained in a rupturable container affixed to either the photosensitive or the positive element and so positioned as to release its contents for spreading between the photosensitive element and the positive element as said elements are brought into superposed relationship. In addition to film units of the roll film type, it is also contemplated to use film units of the film pack and sheet film types.

A camera apparatus suitable for processing roll film of the type just mentioned is provided by the Polaroid Land Camera Model 95, sold by Polaroid Corporation, Cambridge, Massachusetts, or similar camera structure, such as for example the camera forming the subject matter of U.S. Patent No. 2,435,717. Camera apparatus of this character permits exposure of the photosensitive element from the emulsion side thereof by bringing the exposed portion of the photosensitive element in superposed relation with a portion of the print-receiving element while drawing these portions of the film assembly between a pair of pressure rolls which rupture the container associated therewith and spread the processing liquid between and in contact with the exposed portion of the photosensitive element and the corresponding registered area of the print-receiving element.

It will be apparent that by appropriate selection of the image-receiving element from among suitable nonopaque and transparent materials, it is possible to obtain either a colored negative reflection print or a colored negative transparency. The print-receiving element comprises a dyeable material and may comprise a self-supporting image receiving layer or the image-receiving layer may be adhered to a support. As examples of materials suitable for print-receiving layers, mention may be made of nylons, e.g., N-methoxy-methylpolyheramethylene adipamide, polyvinyl alcohol with or without plasticizers, baryta paper, i.e., a support having a baryta coating thereon, partially hydrolyzed polyvinyl acetals such as that commercially available under the name Vinylite MA–28–18 from Bakelite Division, Carbide and Carbon Chemicals Company, cellulose acetate with a filler as, for example, half cellulose acetate and half oleic acid, gelatin, partial acetals of polyvinyl alcohol, e.g., a partial acetal of polyvinyl alcohol and a trialkyl ammonium benzaldehyde quaternary salt, and others of similar nature. The image-receiving layer may also contain a mordant, e.g., a mixture of polyvinyl alcohol or gelatin with a mordant such as poly-4-vinyl pyridine.

Furthermore, the invention may be successfully practiced without the use of a film-forming material in the liquid processing reagent. As an illustration, a nonviscous processing composition is particularly applicable and may be applied to the negative material by imbibition or coating practices or by bathing the negative in the composition, and may be similarly applied to the print-receiving element before the latter and the negative material are brought into superposed relation or contact for carrying out the transfer.

In lieu of having the photosensitive layer and the image-receiving layer located in two separate elements, it is also within the scope of this invention to coat the photosensitive layer over the image-receiving layer, so that both layers are contained in the same element. Where processing is effected by rupture of a container to release the processing composition, a spreading sheet may be utilized to facilitate spreading of the processing composition. It will be apparent that in this embodiment, the processing composition must permeate through the photosensitive layer before reaching the image-receiving layer. After transfer has been effected, the negative image transferred to the image-receiving layer may be viewed by stripping away the spreading sheet. The layer of processing composition and the photosensitive layer adhere more strongly to the spreading sheet than to the image-receiving layer and are removed with the spreading sheet. If desired, a suitable stripping layer may be applied between the image-receiving layer and the photosensitive layer to facilitate this stripping. Structures of this type are described in U.S. Patent No. 2,661,293, issued to Edwin H. Land on December 1, 1953, and particularly with respect to FIG. 7 of said patent.

Mention has been made above of the use in combination with the negative transferring developing agent of a silver halide developing agent which is substantially colorless in at least its unoxidized form and which does not contribute any significant amount of color to the negative transfer image. This additional silver halide developing agent, for convenience, will be referred to herein as an "auxiliary" or a "colorless" silver halide developing agent.

This auxiliary silver halide developing agent may act to accelerate or initiate development. As examples of suitable auxiliary silver halide developing agents, mention may be made of 1-phenyl-3-pyrazolidone, 1-phenyl-4,4-dimethyl-3-pyrazolidone, xylohydroquinone, and 4'-methylphenylhydroquinone. It will be understood that more than one auxiliary silver halide developing agent may be employed and, in certain instances, this may be desirable. The auxiliary silver halide developing agent may be contained in the processing composition or in one or more layers of the photosensitive element, e.g., in a silver halide emulsion layer, the layer containing the negative transferring developing agent in an interlayer or in a layer over the outermost silver halide emulsion layer. Where the auxiliary silver halide developing agent is contained in the processing composition, concentrations of about 0.05% to about 1.0%, by weight, of the auxiliary silver halide developing agent are useful. It will be noted that a portion of the silver halide may be developed by the auxiliary silver halide developing agent, the oxidation product of which then may interact with the negative transferring developing agent to form the desired colored more mobile oxidation product thereof. The auxiliary developing agent may be used in an amount in excess of an accelerating amount in which event a substantial amount of the development is believed to be performed by the auxiliary silver halide developing agent, the negative transferring developing agent being oxidized by reaction with the oxidized auxiliary silver halide developing agent.

Increased negative transfer image density may be obtained by adding a water-miscible organic solvent to the processing composition. This water-miscible organic solvent should be one which will increase the solubility in the processing composition of the colored oxidation product without substantially increasing the solubility of the unoxidized negative transferring developing agent, and the quantity used is such as to achieve this result. It will be recognized that, in some instances, the colored oxidation product may have greater solubility in this organic solvent than the unoxidized negative transferring developing agent. Advantage may be taken of this differential solubility to facilitate and increase the preferential transfer of the colored oxidation product.

The layer containing the negative transferring developing agent may be coated from solvent systems, e.g., by the use of plastics which are soluble in coating compositions containing organic solvents in which said negative transferring developing agent is soluble, or said layer may be coated from aqueous systems wherein said negative transferring developing agent is dissolved in a water-immiscible solvent, preferably a high boiling solvent, and the resulting solution is then dispersed or emulsified into an aqueous solution of a water-soluble, hydrophilic plastic, e.g., gelatin. Techniques for forming such dispersions of water-immiscible solvents in aqueous solutions are well known in the art and may be used for preparing negatives suitable for use in the processes of this invention.

It is frequently very useful to effect development with the negative transferring developing agent in the presence of an antifoggant. The antifoggant is particularly helpful in minimizing or preventing reaction of unexposed silver halide. The antifoggant may be added to the processing composition, to one or more layers of the photosensitive element, to the image-receiving element, or to any combination of these elements. As examples of useful antifoggants, mention may be made of inorganic antifoggants, such as potassium bromide, and organic antifoggants, such as benzotriazole. In some instances, it may be desirable to include in the processing composition, a reagent which will soften gelatin and thereby aid in transferring the more mobile oxidation products to the image-receiving layer. Reagents of this type are known in the art.

It has already been pointed out that if the negative transferring developing agent is colored in the reduced form and is initially positioned in the photosensitive element, it preferably should exert little or only negligible absorption of light available to expose the photosensitive element. Such absorption of light is avoided if the colored negative transferring developing agent is positioned in a layer behind its respective silver halide emulsion. If it is desired to utilize a colored negative transferring developing agent in a photosensitive layer, absorption of light by which the silver halide emulsion layer is exposable may be minimized or avoided by using the colored negative transferring developing agent in the form of low covering power particles, or in a dichroic state, the latter technique being disclosed in the copending application of Edwin H. Land, Serial No. 607,820, filed September 4, 1956. Some dyes exhibit a pH sensitivity such that they absorb at a lower wave length in a neutral or acidic environment and exhibit a bathochromic absorption shift in an alkaline environment. This property may also be used to eliminate undesired absorption of light by the dye. Another method of obtaining a reduced light absorption in the photosensitive element is to attach a group to the chromaphoric system of the negative transferring developing agent which will effect a hypsochromic shift in the color characteristics thereof. Removal of such a group, as by hydrolysis, will effect a bathochromic color shift.

The following examples are given to illustrate the invention and are not to be interpreted as limiting in any manner.

Example 1

A photosensitive element was prepared by coating a gelatin-subcoated film base with a 50:50, by volume, solution of acetone and tetrahydrofuran containing 2% cellulose acetate hydrogen phthalate, and 3.9% of the bis-sulfonyl hydrazide dye of Formula I, 1 cc. of dimethyl formamide being added to 100 cc. of the coating solution. After this layer dried, a layer of a silver iodobromide emulsion was applied. The resulting photosensitive element was exposed and processed by applying an aqueous solution containing:

	Percent
Sodium hydroxide	5.17
Hydroxyethyl cellulose (high viscosity; sold under the trade name Natrasol 250 by Hercules Powder Co., Wilmington, Delaware)	4.03
Benzotriazole	2.3
4'-methylphenylhydroquinone	0.2

spread between the exposed photosensitive element and an image-receiving element as said elements were brought into superposed relationship. The image-receiving layer comprised a 2:1 mixture, by weight, of gelatin and poly-4-vinyl pyridine coated on a support. After an imbibition period of approximately one minute, the image-receiving layer was separated and was found to contain an orange, negative transfer image.

Example 2

The procedure described in Example 1 was repeated and similar negative transfer images were obtained when the processing composition described in Example 1 contained, in addition, n-benzyl picolinium bromide or 1-phenyl-4,4-dimethyl-3-pyrazolidone, and also where the 4'-methylphenylhydroquinone was replaced with xylohydroquinone.

Example 3

A photosensitive element was prepared by coating a gelatin-coated film base with a solution comprising 2% of haematoxylin and 4% cellulose acetate hydrogen phthalate dissolved in a 50:50, by volume, solution of acetone and tetrahydrofuran. After this coating dried, a silver iodobromide emulsion was applied thereon. This photosensitive element was exposed and then processed by

spreading an aqueous liquid processing composition comprising:

	Percent
Sodium carboxymethyl cellulose	4.0
Sodium hydroxide	2.0
Potassium bromide	0.2
1-phenyl-3-pyrazolidone	0.2

between said photosensitive element and an image-receiving element as said elements were brought into superposed relationship. The image-receiving element comprised a cellulose acetate coated baryta paper which has been coated with a 4% solution of N-methoxy-methylpolyhexamethylene adipamide in ethanol. After an imbibition period of approximately one minute, the image-receiving element was separated and contained a negative color image of the photographed subject.

Bis-sulfonyl hydrazide dyes, such as that employed in Example 1 above, may be prepared from dyes having the desired color and possessing a sulfonic acid group which may be reacted with a hydrazine or a monohydrazide to form the desired negative transferring developing agent. It will be apparent that a wide variety of dyes thus are available for conversion into developing agents suitable for use in the processes of this invention. Such hydrazide negative transferring developing agents may contain one or two molecules of the dye. Oxidation of such a hydrazide negative transferring developing agent results in the regeneration of the free sulfonic acid group, thereby providing an appreciable increase in the solubility of the oxidation product in the aqueous alkaline processing composition. It will be apparent that while other solubilizing groups may be present, their number and solubility effect should be selected and/or balanced so as to provide a negative transferring developing agent which is sufficiently soluble in the processing composition to undergo oxidation but which, prior to oxidation, is relatively non-transferable to the image-receiving layer. Mention has been made above of reacting the transferred, colored, more mobile oxidation product. As examples of such further reaction, an oxidation product containing an available coupling position, e.g., an open position para to a hydroxyl group, may be coupled with a diazonium salt or with the oxidation product of a color developer.

The colored negative transferring developing agents of this invention are dye developers in the reduced or unoxidized form, i.e., they are compounds which are both a dye and a silver halide developing agent. The dye developers employed in the processes claimed in my said copending application Serial No. 748,421 are characterized in providing a less mobile oxidation product whereby the unoxidized dye developer is transferred to form a positive transfer image. In the invention claimed herein, oxidation of the dye developer provides a more mobile colored oxidation product which is transferred to form a negative transfer image.

Since certain changes may be made in the above product and process without departing from the scope of the invention herein involved, it is intended that all matter contained in the above description shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A process of forming a diffusion transfer image in color comprising the steps of exposing a photosensitive element including a support carrying a silver halide emulsion, applying to said exposed photosensitive element an aqueous alkaline solution and developing said exposed silver halide emulsion in the presence of a silver halide developing agent, said silver halide developing agent, upon oxidation, forming an oxidation product which is substantially more mobile and more diffusible in said aqueous alkaline solution than is said silver halide developing agent, said oxidation product being colored and having a lower molecular weight than said silver halide developing agent, forming said more mobile oxidation product in developed areas of said exposed silver halide emulsion as a function of said development, and preferentially transferring, by diffusion, said more mobile oxidation product to a superposed image-receiving layer to form a visible color image which is a negative transfer image.

2. A process as defined in claim **1**, wherein said more mobile oxidation product is a dye having a predominant absorption within the region of the visible spectrum to which said silver halide is sensitive.

3. A process as defined in claim **1**, wherein more mobile oxidation product contains an available azo coupling position and said transfer color image is formed by coupling said transferred, more mobile oxidation product with a diazonium salt.

4. A process as defined in claim **1**, wherein said silver halide developing agent is haematoxylin.

5. A process of forming a diffusion transfer image in color comprising the steps of exposing a photosensitive element including a support carrying a silver halide emulsion, applying to said exposed photosensitive element an aqueous alkaline solution and developing said exposed silver halide emulsion in the presence of a colored silver halide developing agent, said silver halide developing agent, upon oxidation, forming an oxidation product which is substantially more mobile and more diffusible in said aquous alkaline solution than is said silver halide developing agent, said oxidation product being colored and having a lower molecular weight than said silver halide developing agent, forming said more mobile oxidation product in developed areas of said exposed silver halide emulsion as a function of said development, and preferentially transferring, by diffusion, said more mobile oxidation product to a superposed image-receiving layer to impart thereto a visible color image which is a negative transfer image.

6. A process as defined in claim **5**, wherein said more mobile oxidation product is a dye having a predominant absorption within the region of the visible spectrum to which said silver halide is sensitive.

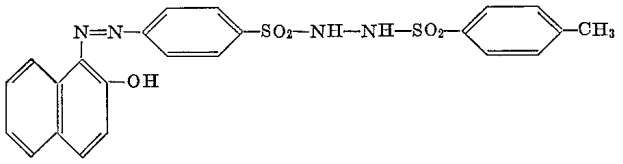
7. A process as defined in claim **5**, wherein said silver halide developing agent is initially contained in said photosensitive element in a layer positioned between said silver halide emulsion and said support.

8. A process as defined in claim **5**, wherein said development is effected in the presence of an additional silver halide developing agent, said additional silver halide developing agent being substantially colorless.

9. A process as defined in claim **5**, wherein said development is effected in the presence of an antifoggant.

10. A process as defined in claim **5**, wherein said silver halide emulsion is a gelatino silver halide emulsion and said processing solution includes a reagent which will soften gelatin.

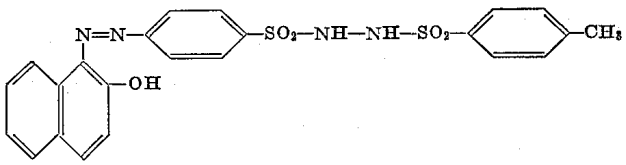
11. A process as defined in claim **5**, wherein said silver halide developing agent is:



12. A process as defined in claim **5**, wherein said oxidation product contains a sulfonic acid group generated by oxidation of a sulfonyl hydrazide group in said silver halide developing agent.

13. A photographic product comprising a support, a photosensitive silver halide emulsion contained in a layer carried by said support and a layer positioned between

said silver halide emulsion layer and said support, said last-mentioned layer containing:



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