Ocho películas de CdSe impurificadas con diferentes volúmenes de la solución que contiene Erbio (Er^{3+}), utilizando la técnica de Depósito por Baño Químico (DBQ) crecidas a 65°C sobre sustratos de vidrio portaobjetos son investigadas. Las soluciones utilizadas en este trabajo fueron: $CdCl_2$ 0.01M, KOH 0.1M, NH_4NO_3 0.5 M, $SeC(NH_2)_2$ 0.03 M, $Er(NO_3)$. $5H_2O$ 0.022 M. Los espectros de Rayos X muestran la estructura cristalina modificada de fase Zincblenda a mezcla de fases Zincblenda/Wurtzita, se observa la fase Zincblenda en mayor proporción, como resultados de la impurificación. Los espectros de absorción óptica muestran comportamiento oscilatorio en los valores de ancho de banda prohibida (Eg) con tendencia hacia baja energía. La muestra no impurificada presenta estructura Zincblenda, etiquetada como CdSe (AG), es utilizada como referencia. Para la película impurificada con 2 ml de Er^{3+}, el ancho de banda prohibida (Eg) es 1.80 eV, hasta el valor mínimo de 1.73 eV para la película impurificada con 30 ml; el corrimiento energético es de 0.07 eV. El impurificante Er^{3+}, es agregado en la etapa de nucleación, los iones así implantados en la red cristalina ocupan las vacancias de Se^{2-} del CdSe para volúmenes bajos de impurificante y los intersticios son ocupados para volúmenes mayores de 2 ml hasta alcanzar la saturación.

S13-P2
TRUE VISCOSITY AND DRIFT FLUX ANALYSIS

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Column flotation are enjoying renewed interest due to new applications such as de-inking of recycled paper, industrial effluents treatment, and de-oiling of water. According to reported results, the efficiency of a given dispersion process depends on the characteristics of the dispersed phase. In order to predict an appropriate gas holdup, bubble surface area flux, and bubble size for a given duty, a mathematical model known as Drift Flux Analysis is currently applied. Drift Flux Analysis assumes a constant dynamic viscosity of the continuous phase (one cP or one grame/centimetre-second) not matter the changes as result of the pulp consistency or solids content. This paper shows the relevance of considering the real value of the dynamic viscosity in terms of the characteristics of a gas dispersion. Viscosity of water was varied by using a polymer and the bubble size, bubble surface area, and gas holdup were calculated through the Drift Flux Model. Results show a good agreement between the calculated and measured bubble diameter once the true value of viscosity of the continuos phase is considered during the solution of the drift flux model. For assumptions of unchanged viscosity, both the calculated and the measured bubble diameters show a great disagreement, as result of viscosities different from one centipoise.

S13-P3
RECUPERACIÓN DE PLATA DE LAS SOLUCIONES PROVENIENTES DE LOS DESECHOS DE LA INDUSTRIA FOTOGRÁFICA

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A lot of silver consumed each year in the world is used for photographic and radiographic applications. Once revealed the photos or radiographs great amount of silver ends as solid or liquid wastes. These wastes represent a 60% of the world production. Although this silver can be recovered and recycled, the existent technologies do not satisfy the requirements of maximum silver recovery and the environment levels (less than 5 ppm). In this work, a voltammetric and chronoamperometric study to silver deposition from photographic waste solutions is presented. These studies were carried out on different substrates to localize the material and energetic conditions for silver recovery on an electrochemical process. This study will serve as antecedent to silver recovery on a pilot level.

S13-P4
OPTICAL AND ELECTRICAL PROPERTIES OF THIN FILMS OF TITANIA MATRIZ DOPED WITH INDIUM IONS

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Titania Thin Films are grown by Sol-Gel Process, Dip Coating technique and doped with Indium ions over glass sustrates. The samples are prepared using Titanium Isopropoxide following hidrolisis reaction with Indium Nitrate to produce transparent thin films with several concentrations of Indium ions. The samples are characterized using UV-VIS and IR spectroscopy to determined optical properties and electrical properties using Hall Effect to calculate the carrier density. The objective of this work is to produce conductive and transparent thin films for photonic applications.

S13-P5
OPTICAL AND ELECTRICAL PROPERTIES OF TITANIA THIN FILMS DOPED WITH TUNGSTEN

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Using Titanium Isopropoxide and Tungsten Chloride are prepared transparend thin films. The samples are characterized using UV-VIS and IR spectroscopy to determined optical properties and electrical properties using Hall Effect to calculate the carrier density. The objective of this work is to produce conductive and transparent thin films for photonic applications.

S13-P6
OPTICAL AND STRUCTURAL CHARACTERIZATION OF NICKEL OXIDE BASED THIN FILMS CHEMICALLY DEPOSITED

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