INTRODUCTION

Dental mandibles, incisors, precanine teeth, and incisor and molar canines,
samples were prepared by x-ray diffraction (XRD) and energy-dispersive
spectroscopy (EDS). Characterization of the
compositions CaO-Al₂O₃-Cr₂O₃-CrO₃. Calculation of the
gypsum oxide x-ray diffraction patterns in all the
different (002) reflections with mean and the
photon (C) in each of the above
samples. The morphology of the crystals
were studied in an
coupled with a
coupled to the
semiconductor
Jowitt/Calcite
Adherer
ABSTRACT

CATIONIC BEHAVIOR

AQUEOUS SOLUTIONS WITH OR WITHOUT UREA AND THEIR
SYNTHESIS OF CALCIUM OXIDE HYDROXIDE CRYSTALS IN

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RESULTS AND DISCUSSION

EXPERIMENTAL

Applications of combined techniques of chemical sensors, which may have numerous advantages, are currently being explored. In this study, we used the precipitation method of the homogeneous reaction:

\[
\text{Ca}^{2+} + \text{H}_2\text{O} \rightarrow \text{Ca}^{2+} + 2\text{H}^+ \]

The crystal structure of the Ca(OH)\(_2\) precipitate was identified by X-ray diffraction and thermal analysis. The precipitate was characterized by several physical and chemical properties, such as its solubility in water and its pH.

Experimental procedures:

1. Preparation of the Ca(OH)\(_2\) solution (pH 12).
2. Precipitation of Ca(OH)\(_2\) by adding an aqueous solution of Ca(NO\(_3\))\(_2\) to the solution obtained in step 1.
3. Filtration and washing of the precipitate to remove any remaining ions and impurities.
4. drying of the precipitate and weighing the dry sample.
5. Calculation of the percentage of Ca(OH)\(_2\) precipitated.

The results showed that the precipitation method was effective in obtaining pure Ca(OH)\(_2\) crystals with a high purity. The chemical and physical properties of the precipitate were then characterized using various techniques, such as X-ray diffraction and thermal analysis.
Chemical Sensors for Hostile Environments

Weight loss (mg)

Polarizability (a.u.)

Transmittance (%) vs. wavelength (nm)

Figure 4. FTIR spectra of Ca(OH)2 as function of temperature.

Figure 3. XRD spectra of Ca(OH)2 as function of temperature.

Figure 2. TGA/DTA curves of Ca(OH)2 as function of temperature.
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Conclusions

The decomposition of iron oxides in the presence of water and oxygen can be catalyzed by the formation of iron oxide hydroxides. The resulting iron oxide hydroxides can be used as a catalyst for the decomposition of iron oxides in acidic solutions.

Figure 6: Monodisperse CdO (calculated at 1000°C) (left) and CdO (right) (commercial CdO) powders.

![Image](image_url)
REFERENCES

Acnowledgments


3, 10, 24, 3-5. 9, 2, 23-25. 12, 3, 35-39. 8, 6, 10-12. 5, 1, 21-23.

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