

Classroom Photocopying Permission

Chapters from Teaching General Chemistry: A Materials Science Companion. Copyright © 1993 American Chemical Society. All Rights Reserved. For reproduction of each chapter for classroom use, contact the American Chemical Society or report your copying to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923.

Experiments from Teaching General Chemistry: A Materials Science Companion. Copyright © 1993 American Chemical Society. All Rights Reserved. Multiple copies of the experiments may be made for classroom use only, provided that the following credit line is retained on each copy: "Reproduced with permission from *Teaching General Chemistry: A Materials Science Companion.*" You may edit the experiments for your particular school or class and make photocopies of the edited experiments, provided that you use the following credit line: "Adapted with permission from *Teaching General Chemistry: A Materials Science Companion.*"

Overhead Masters

Multiple copies of the overhead masters may be made for classroom use only, provided that the extant credit lines are retained on each copy: "© 1993 American Chemical Society. Reproduced with permission from *Teaching General Chemistry: A Materials Science Companion*" or "© 1995 by the Division of Chemical Education, Inc., American Chemical Society. Reproduced with permission from *Solid-State Resources* ."

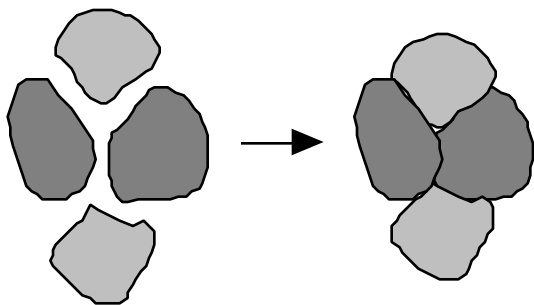
Laboratory Safety

DISCLAIMER

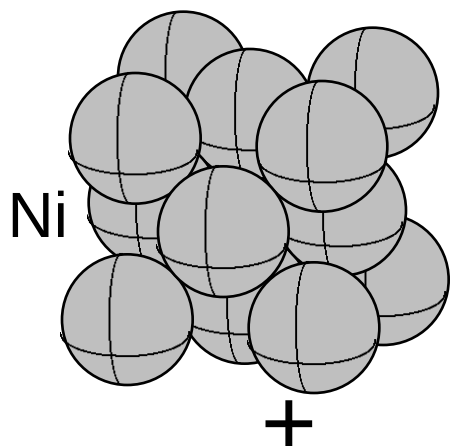
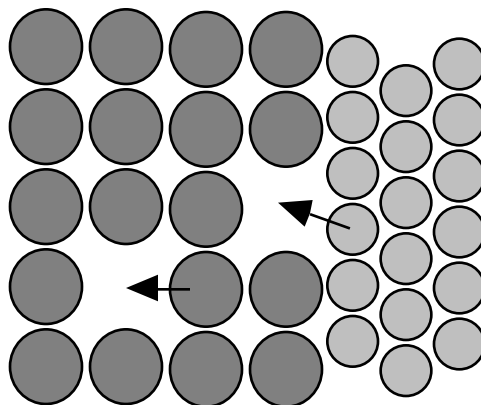
Safety information is included in each chapter of the Companion as a precaution to the readers. Although the materials, safety information, and procedures contained in this book are believed to be reliable, they should serve only as a starting point for laboratory practices. They do not purport to specify minimal legal standards or to represent the policy of the American Chemical Society. No warranty, guarantee, or representation is made by the American Chemical Society, the authors, or the editors as to the accuracy or specificity of the information contained herein, and the American Chemical Society, the authors, and the editors assume no responsibility in connection therewith. The added safety information is intended to provide basic guidelines for safe practices. Therefore, it cannot be assumed that necessary warnings or additional information and measures may not be required. Users of this book and the procedures contained herein should consult the primary literature and other sources of safe laboratory practices for more exhaustive information. See page xxv in the Text 0 Preface file in the Companion Text folder for more information.

“Heat and Beat” Methods

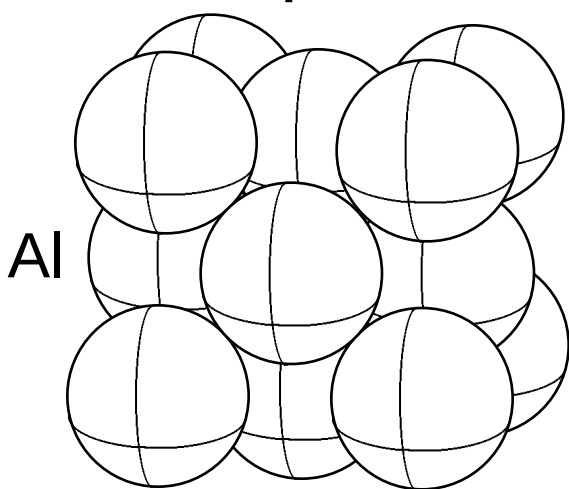
Grinding



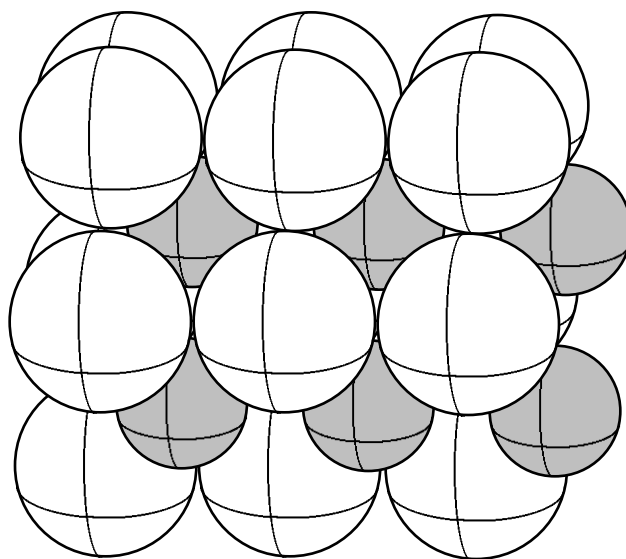
Diffusion

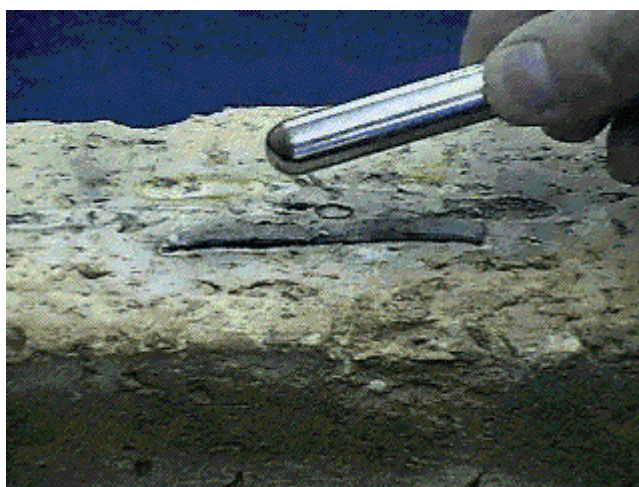
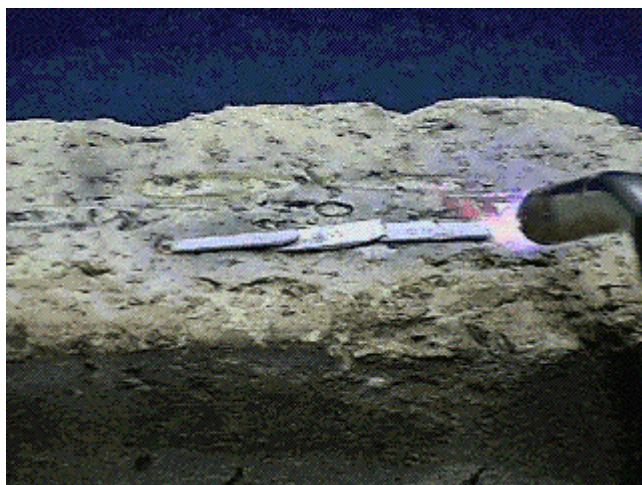
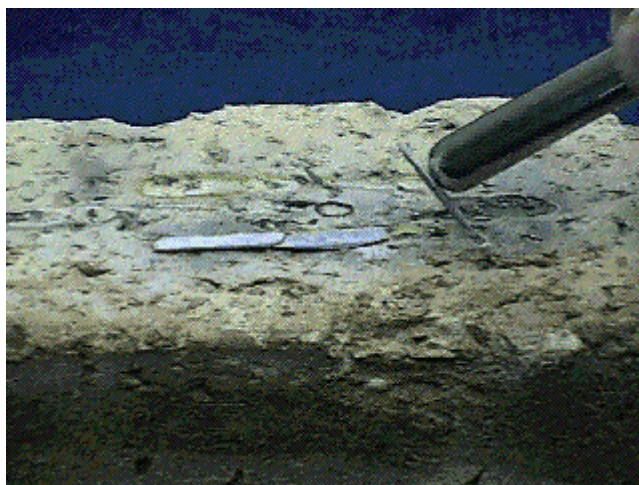


+

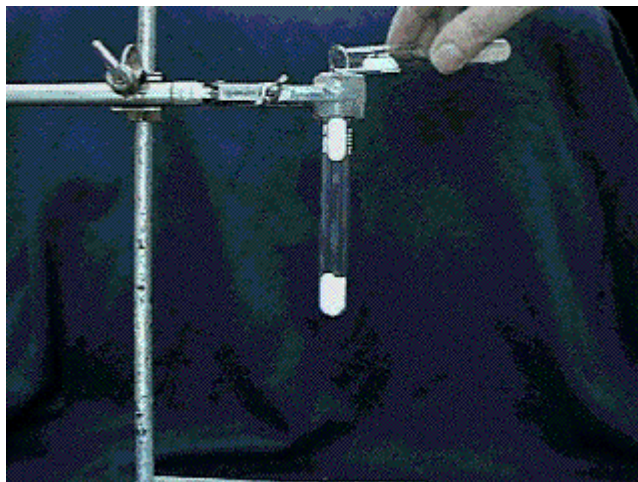


Reaction

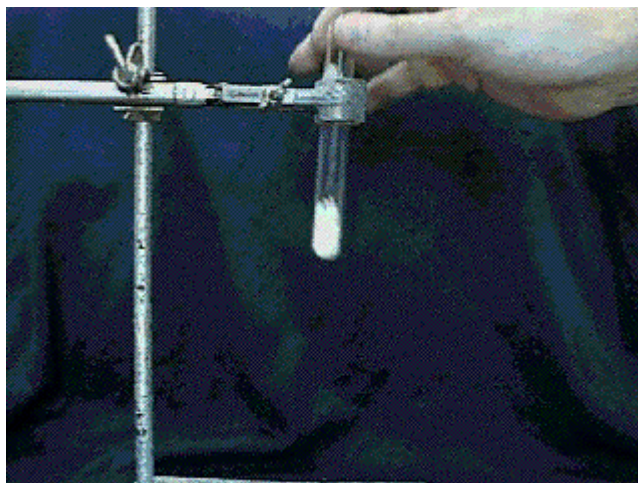




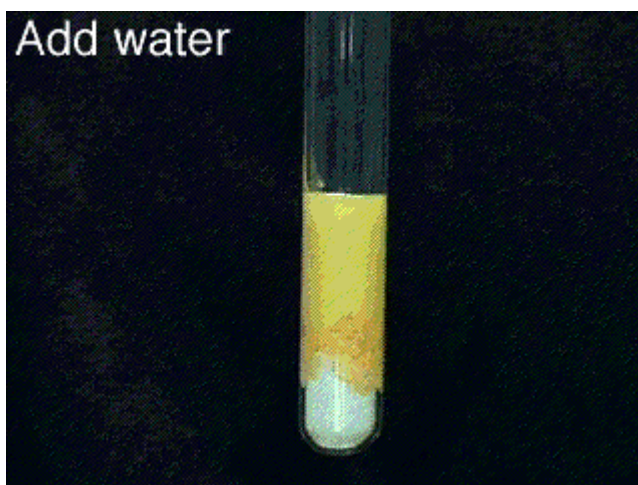
Diffusion in Solids



Mix lead nitrate and potassium iodide

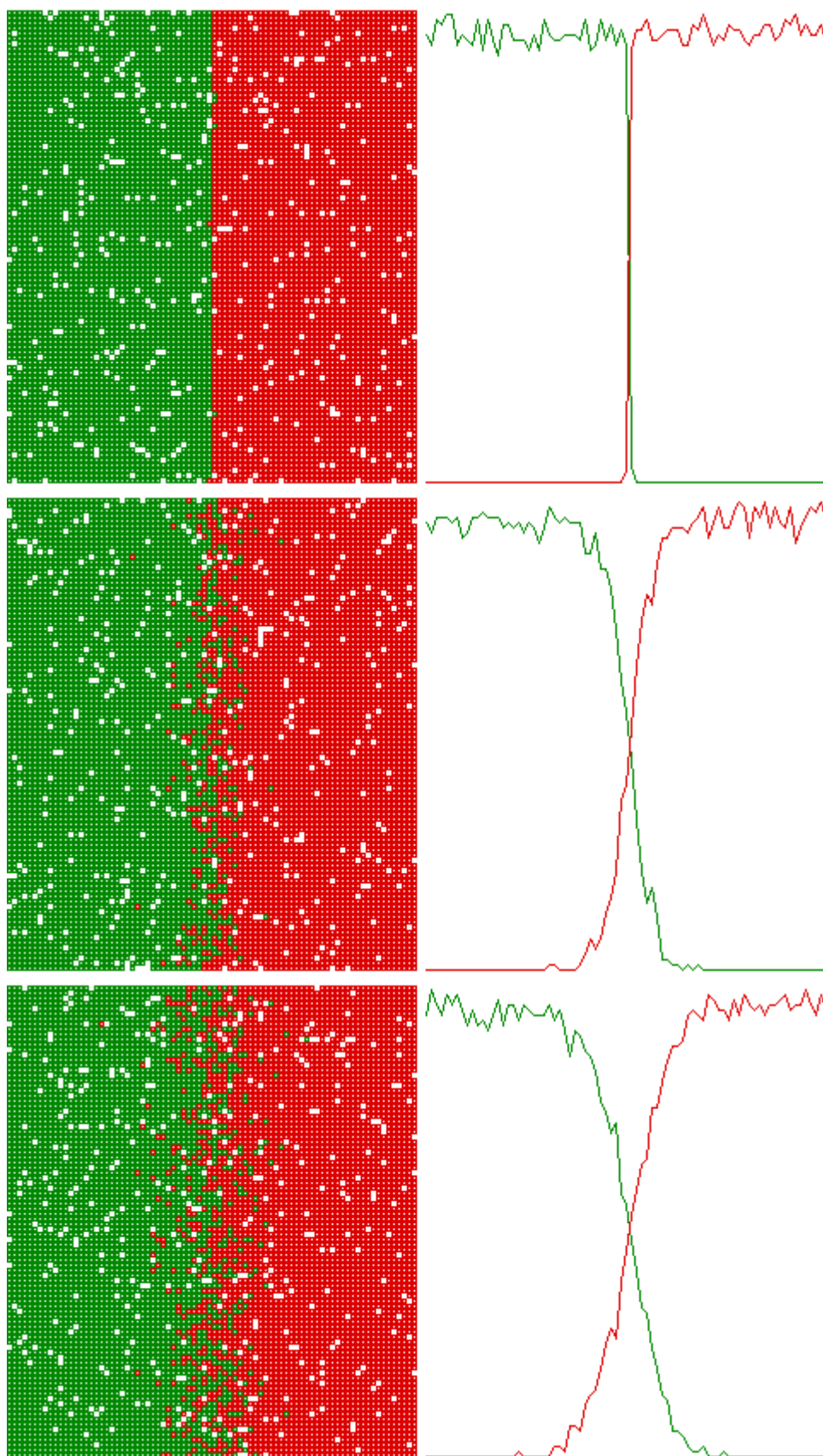


little happens until...



Add water

Diffusion in Solids



Laser and Fiber Optic



Laser Off



Laser On

Fiber optic is 5 meters long.