



Courseware Portfolio Management Director: Jeanne Zalesky

Executive Courseware Portfolio Manager: Terry Haugen

Courseware Director, Content Development: Jennifer Hart

Development Editor: Erin Mulligan

Courseware Analyst: Coleen Morrison

Portfolio Management Assistant: Lindsey Pruett

Portfolio Management Assistant: Shercian Kinonian

VP, Product Strategy & Development: Lauren Fogel

Content Producers: Lisa Pierce, Mae Lum

Managing Producer: Kristen Flathman

Director, Production & Digital Studio: Laura Tommasi

Editorial Content Producer: Jackie Jakob

Director, Production & Digital Studio: Katie Foley

Senior Mastering Media Producer: Jayne Sportelli

Rights and Permissions Manager: Ben Ferrini

Rights and Permissions Management: Cenveo Publisher Services

Photo Researcher: Eric Schrader

Production Management and Composition: codeMantra

Design Managers: Marilyn Perry, Maria Guglielmo Walsh

Cover and Interior Designer: Jeff Puda

Contributing Illustrators: Lachina

Manufacturing Buyer: Maura Zaldivar-Garcia

Product Marketer: Elizabeth Bell

Executive Field Marketing Manager: Chris Barker

Cover Art: Quade Paul

Credits and acknowledgments borrowed from other sources and reproduced, with permission, in this textbook

appear on the appropriate page within the text.

Copyright © 2018, 2015 by Pearson Education, Inc., publishing as Pearson Benjamin Cummings. All rights reserved. Manufactured in the United States of America. This publication is protected by Copyright, and permission should be obtained from the publisher prior to any prohibited reproduction, storage in a retrieval system, or transmission in any form or by any means, electronic, mechanical, photocopying, recording, or likewise. To obtain permission(s) to use material from this work, please submit a written request to Pearson Education, Inc., Permissions Department, 1900 E. Lake Ave., Glenview, IL 60025. For information regarding permissions, call (847) 486-2635.

Many of the designations used by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and the publisher was aware of a trademark claim, the designations have been printed in initial caps or all caps.

MasteringChemistry™ and Learning Catalytics™ are trademarks, in the United States and/or other countries, of Pearson Education, Inc. or its affiliates.

Library of Congress Cataloging-in-Publication Data

Names: Tro, Nivaldo J.

Title: Chemistry : structure and properties / Nivaldo J. Tro.

Description: Second edition. | Hoboken, NJ : Pearson, [2018] | Includes index.

Identifiers: LCCN 2016043206 | ISBN 9780134293936

Subjects: LCSH: Chemistry—Textbooks.

Classification: LCC QD33.2.T7595 2018 | DDC 540—dc23

LC record available at <https://lcn.loc.gov/2016043206>



www.pearsonhighered.com

Student Edition: ISBN 10: 0-134-29393-2; ISBN 13: 978-0-134-29393-6

Books A La Carte Edition: ISBN 10: 0-134-52822-0; ISBN 13: 978-0-134-52822-9

Not for Distribution