



# THE ORTHODONTIC MATERIALS INSIDER



December 1997, Vol. 10, No.4

A quarterly dedicated to **orthodontic professionals**, and to the renewal of their habits and tools by **ORTHO-CYCLE CO., A COMPANY WHICH RECONDITIONS, BUYS AND SELLS ORTHODONTIC APPLIANCES.**

Editor: Claude G. Matasa, Doctor of Chemical Engineering, Doctor of Technical Sciences, Professor of Oral Biomaterials  
Copy Editor: Milton B. Asbell, D.D.S.



## THE FIRST PERIODICAL ON ORTHODONTIC MATERIALS CELEBRATES IT'S TENTH ANNIVERSARY

### SOME OF OUR READER'S COMMENTS

1988

*GTM, Professor, Univ. of Illinois, Chicago, IL:* "I am very much impressed with your material 'Adhesion and its Ten Commandments'."

1990

*RM, Norfolk, VA:* "I enjoy reading your essays in "Phoenix" and find them to be refreshing intelligent. I particularly like your debunking of mechanical myths that persist in our profession, propagated by supply companies and clinicians who lack a basic engineering background... There are still a lot of false idols that need smashing."

1991

*SBF, Professor, U. of Pennsylvania, Philadelphia, PA:* "I am enclosing the copy coupon regarding additional quarterly newsletters as they become available. I have used these for both classes so that our residents may get a better perspective on the metallurgy and other characteristics of our orthodontic appliances as you have described them in your quarterly letters. We appreciate this service and are looking forward to forthcoming issues."

1992

*BCJ, Professor, U. of Connecticut, Farmington, CT:* "I agree with your conclusion that brackets, using present techniques, cannot be overly reduced in mesial distal width for many reasons including friction."

*BM, Professor, West Virginia Univ., Morgantown, WV:* "Your quarterly 'Phoenix without Ashes', has been brought to my attention by Dr. Kitchen. I found the recent article concerning corrosion to be useful for demonstrating the problems with gold-plating oral appliances."

*LAN, Coral Gables, FL:* "Thank you for your excellent newsletter. Please continue to send your informative, educational newsletter to our office."

*RH, Professor, Univ. of Alabama, Birmingham:* "I have read some of the articles in your publication and have enjoyed reading them."



*RM, Professor, Univ. of Innsbruck, Austria:* "I was a very interested reader of your 'Phoenix', one of my favorite sources of information on bracket technology... I would like to invite you to give a course..."

*HJJ, Papillion, NE:* "I have enjoyed your technical articles and found your quarterly very informative."

*BWE, Fort Dodge, IA:* "I heartily believe in your company and all you stand for -honesty and excellence-a great combo..."

*LJL, Coos Bay, OR:* "'Phoenix' has had some really good ideas and discussions in the past; keep up the good work."

*SBF, Professor, Univ. of Pennsylvania, Philadelphia, PA:* "I want to thank you again for sending your periodical to our students at Penn. It gives a different perspective than the manufacturers would like and exemplifies the old saying that "there are two sides to every question."

1993

*RPE, Professor, Univ. of Stellenbosh, S. Africa:* "I have enjoyed receiving your quarterly publication 'Phoenix' "...

*STM, Professor, Univ. of Minnesota, Minneapolis, MN:* "Good luck in your continued efforts to make some sense of all the confusion between mechanics and mytology."

*MJP, Professor, Univ. of London, UK:* "The points you make in your article are pertinent, and I know that there are many clinicians who would totally agree with you..."

*OIV, Valencia, Spain:* "Your article is very thorough and especially interesting to me since I am at the moment studying brackets."

*KG, Chairman, T-3J Unit Committee, Du Pont de Nemours, Beaumont, TX:* "I read with interest your September 1992 newsletter regarding microbiological attack of orthodontic appliance adhesives and alloys respectively. I fully agree that there appears to be parallels between MIC (Note: Microbiologically Influenced Corrosion) in industry and MIC in the mouth. This information would be of interest to the NACE (National Association of Corrosion Engineers) community."

*KJS, Lakewood, CO:* "Keep it comin! It's great to have a medium to cut through the ad hype!"

GTM, Professor, U. of Illinois, Chicago, IL: "I found your article on magnets very interesting and I think the materials makes excellent background for anybody about to undertake their use. I certainly learned a good deal and have already read a lot on the subject."

PWR, Professor, Univ. of N. Carolina: "Thanks for sending me the material on the straight wire appliance that you plan to publish. I find it an entirely appropriate reaction to the tremendous overstatements made by the proponents of the appliances..."

HJL, Walnut Creek, CA: "I always enjoy your informative articles in your newsletter. As the director of a study group of 25 dentists who meet monthly, I am always looking for informative speakers. The metallurgy and chemistry of orthodontic appliances is a subject we've never had addressed to us."

SBF, Professor, U. of Pennsylvania, Philadelphia, PA: "I was pleased to receive the latest issue of 'Phoenix without Ashes' and enjoyed reading your review of the early days. You've certainly done your home work!"

1994

BD, La Mesa, CA: "I really enjoy your newsletter. I always read it and it is very interesting".

SBF, Professor, U. of Pennsylvania, Philadelphia, PA: "While I have only spoken with a few faculty with engineering degrees from other departments, my impression is that they are involved with research in relatively narrow areas and do not express (to me, at least) the breadth of knowledge reflected in your discussions about the alloys we use".

CGJ, Editor, Provo, UT: "From contacts with my orthodontists friends, and reading your newsletter, I am impressed with what you have accomplished, and congratulate you for your efforts. Your and our activities appear to have many similarities".

BAS, Jacksonville, FL: "I enjoy a scientist's investigator who can write with an informative 'forensic' style!"

NGS, Alhambra, CA: "You last issue about the design of brackets is excellent. I recently had a problem with the strength of the Mini-Twin brackets (one piece casting bracket) from Unitek..."

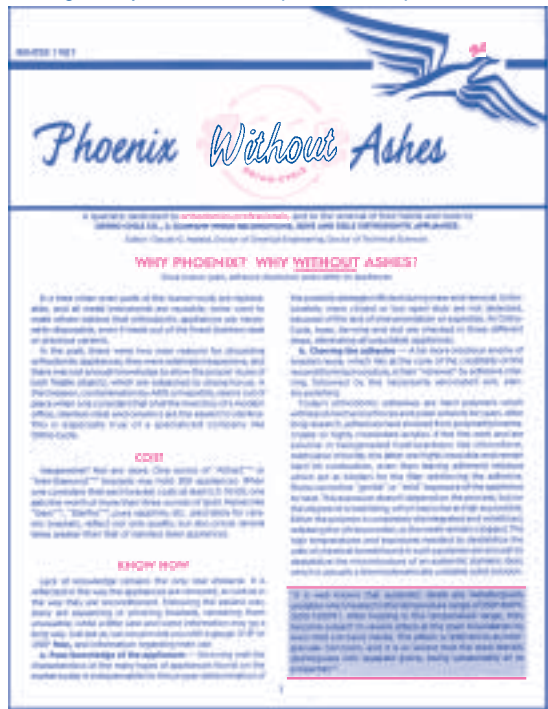
1995

NI, Bruhl, Germany: "First of all, congratulations for the interesting information that you are bringing every time about the new orthodontic materials in the "Insider" journal."

ZJ, Editorial Assistant, W.B. Saunders, Philadelphia, PA: "I am writing on behalf of Dr. Nanda to thank you for allowing us to use your figures in Biomechanics in Clinical Orthodontics, publishing shortly".

AWA, Oak Brook, IL: "I wanted to take a moment to thank you for developing your newsletter 'Phoenix' and now 'Insider'... I feel your news letter can provide an invaluable service to the orthodontic profession. With manufacturers interested in selling their products, not in testing them, and the journals willingness in spreading the disinformation about these products, an alternative source of information is needed, and I feel your newsletter would be an excellent choice. Thank you and keep the good work."

HJK, Sydney, Australia: "As a son of a metallurgist who commanded international respect during his working years, I can relate to many of the articles that you publish. The physical properties of the alloys that we use, the quality control (or lack of) and the seemingly cavalier approach of many companies when selling what appear to be untested products onto the market are all things to which I can relate. In my view, your publication goes a long way to provide information that seems to be lacking in any other form of professional publication."



CA, Editor, Barcelona, Spain: "I have received several issues of your 'Phoenix without Ashes' and lately the December issue of the 'Orthodontic Materials Insider'. I am very interested in receiving it also in the future... I would like to publish in our Journal one or more articles on brackets, and I think that your work can be very interesting for our readers. Or would you give us the permission to publish a translation of information already appeared in the "Insider" or in former articles?"

WAL, Wyoming PA: "I find your informational brochures to be very informative and I look forward to receive them..."

BB, Olsenburg, Germany: "The 'Insider' is a very interesting view of orthodontic materials."

KPC, Westville, IN: "Our office always enjoys reading your quarterly publication, 'The Insider,' and were interested to see that you included mention of my Tip-Edge® bracket."

CRR, Huntsville AL: "Thanks for all the great information you put in it. I do not know of any place to get such unbiased and objective views..."

SAA, Staten Island, NY: "Keep this extremely informative brochure/ newsletter coming. We love it."

GTM, Professor, U. of Illinois, Chicago, IL: "In a field in which my colleagues and I have done considerable research, you have enlightened your readers of 'Phoenix', a publication you personally fostered for the good of the profession."

BAS, Jacksonville, FL: "I certainly appreciate this excellent publication".

FPA, Seattle, WA: "I made a copy (of the "Insider") as I want to keep the article intact. Thanks for the good work."

MGK, Rapid City, SD: "Past issues have been read assiduously, enjoyed, and have led to an increase of this person in appreciation of not only your particular services, but of many subjects in orthodontics about which similar information is unavailable elsewhere..."

1996

MES, Greenwood, SC: "I enjoy your publication ("Insider") and consider it to be the best and most complete information available... Thanks for doing a great job."

SBF, Professor, Univ. of Pennsylvania, Philadelphia, PA: "Recently, I have been musing about these contributions as well as your publications in American J. Orthod. and wonder if you've ever considered either writing a book on your own, or else finding a knowledgeable kindred soul to collaborate."

DM, Tel-Aviv, Israel: "Thank you very much for sending me the back issues of the "Phoenix" I hope to have the honor of hosting you as a speaker at a future conference"

CA, Editor, Barcelona, Spain: "It has been a pleasure and an honour to republish your work in our journal."

ML, Bradford, England: "I would be most grateful if you could send me a further copy of the recent 'Insider' which discussed the nickel content of different bracket systems. We have a patient who has recently developed nickel allergy during treatment".

HC, Editor, Orthodontic Update, Aberdeen, England: " Would you please accept my thanks for your most prompt reply with the back issues of your "Insider" and their abridged German translation in the 'Informationen aus Orthodontie und Kieferorthopadie'. They are a great help in preparing my article. They are also most elegantly written and presented "

KMM, Professor, NY University: "...A significant step in the right direction (NB. the evaluation of new materials) is the rare gem of published information known for many years as 'Phoenix Without Ashes' and more recently renamed "Orthodontic Insider."

1997

WJR, Layton, UT: "I find it very informative and interesting."

MS, Havertown, PA: "Keep up the good fight. I loved the way you described the cleansing process that will kill all life forms."

ERA, Boca Raton, FL: "Please keep up the good work and keep sending me the newsletter. I appreciate all you have gone through."

MRJ, Santa Cruz, CA: "The Orthodontic Materials Insider' -I think it is great."

VJC, Toronto, Canada: "I wish to first congratulate you on the Self-engaging bracket article. It was pointed, concise and brilliantly illustrated... I greatly appreciated reading your article and I look forward to such pleasant and informative further communication."

RM, Amman, Jordan: "Thank you for your great newsletter since it is the only one that talks about orthodontic materials and it consists of valued information."

LJC, Houston TX: "Thank you for your commitment to the betterment of orthodontics"

MJF, Grand Rapids, MI: "Please continue to send us the informational 'Insider'... Thank you so much for your efforts".

RW, Wurtzburg, Germany: "I like it very much"

HAP, Consultant Orthodontist, Romford, Essex, UK: "...We find it very informative and interesting"

EDN, Manchester, UK: "I wish to assure you that I very much enjoy your quarterly copy of your newsletter"

WH, Coral Gables, FL: "Your publication is excellent... I look forward to your very informative articles"

PJR, Consultant in Orthodontics Kilmarnock, Ayrshire, UK: "...Your publication is, in every way, first class"

JJP, Professor, Univ. of Geneva, Switzerland: "For teaching purposes, could you send us an additional 12-15 copies, if available, for graduate students and staff?"

FT, Ferny Hills, Queensland, Australia: "We do like the 'Insider' and would appreciate it if you could continue sending it to us"

WJA, Anniston, AL: "I like your newsletter, so please continue to send it to us. I like your quizzes and prizes too."

PCB, Phoenix, AZ: "...The information included is unsurpassed and extremely useful"

PWS, Orthodontic Consultant, Sacramento CA: "I enjoy your publication and particularly this one explaining all the brackets."

BD, Professor, Brasilia, Brazil: "As the orthodontic department chairman of the University of Brasilia, reading 'Insider' is an unequal opportunity to be updated in the topics covered by that newsletter... Right now I am sending a copy to another teacher from the north part of Brasil"

EW, Dallas TX: "Many pearls of wisdom in your 'Insider'. Thanks !"

VJA, Statesville, NC: "It is always informative. I especially liked this issue which had a great synopsis of 'self-engaging brackets'"

SJP, Consultant orthodontist, Doncaster, UK: "I would very much appreciate you continuing to send it to me since it is very useful for my clinical practice."

HM, Lima, Peru: "Thank you very much for your excellent publication which allows us, orthodontic professionals, I quote, 'to renew our habits and tools'"

GRE, Oklahoma City, OK: "I enjoy your newsletter very much."

HBA, Philadelphia PA: "I find it very interesting and informative"

MDR, Bowie, MD: "Please continue your excellent newsletter"

SJE, Toronto, Canada: "The publication looks very interesting."

### SUMMARY OF SOME OF OUR PAST ISSUES

<b>Winter 1987:</b> -Criteria to identify brackets regardless of brand or prescription.	<b>June 1993:</b> -Evolution of some orthodontic biomaterials.
<b>Spring 1988:</b> -How to preserve the most delicate part of a bracket during debonding	<b>September 1993:</b> -Magnets and orthodontics
<b>Summer 1988:</b> -Adhesion and its ten commandments	<b>December 1993:</b> -Could the gap be ever bridged? Interview with HP Bimler
<b>Fall 1988:</b> -The newest method of non-damaging debonding	<b>March 1994:</b> -One-piece brackets are here to stay! (I)
-The hardness analysis of several brackets	<b>June 1994:</b> -One-piece brackets are here to stay! (II)
<b>Winter 1988:</b> -Silanation: how coupling agents or primers work	<b>September 1994:</b> -Preadjusted appliances: One shoe fits all? (II) -Microhardness, a tool to evaluate brackets
<b>Spring 1989:</b> -Direct bonding brackets: Incredible manufacturing errors	<b>December 1994:</b> -Breakthroughs in biomaterials are already here, or expected soon...
<b>Summer 1989:</b> -The increase in retention through chemical attack: etching	<b>March 1995:</b> -The edgewise bracket versus friction
<b>Fall 1989:</b> -A "Blue book" of the main direct bonding brackets	<b>June 1995:</b> -Ionites, complexes, chelates...
<b>Spring 1990:</b> -Faulty brackets on the market	<b>September 1995:</b> -A do-it yourself friction testing -Titanium, a metal with a future in orthodontics
<b>Summer 1990:</b> -Trends in direct bonding appliances (I)	<b>December 1995:</b> -Trends: Good bye Ni: Welcome Co, Mn
<b>Fall 1990:</b> -Trends in direct bonding appliances (II)	<b>March 1996:</b> -Milling, casting, or injection molding?
<b>April 1991:</b> Trends in ceramic brackets	<b>June 1996:</b> -Materials orthodontists use: elastomers
<b>June 1991:</b> -Bracket brazing: Achille's heel	<b>September 1996:</b> -Twenty years of "Ortho-recycling":
<b>September 1991:</b> -Metals used in today's brackets	<b>December 1996:</b> -Self-engaging brackets: passive vs. active
-Why synthetic sapphire brackets break	<b>March 1997:</b> -NiTi alloys: Two metals in one
<b>April 1992:</b> -Bracket corrosion: phenomena and consequences	<b>June 1997:</b> -Ceramic brackets: Properties never studied before
<b>June 1992:</b> -Bracket corrosion prevention	-Impact resistances of ceramic brackets
<b>September 1992:</b> -Microbes feed on adhesives	-Bracket slot friction examined through atomic force microscopy
<b>December 1992:</b> -Microbes feed on stainless steel attachments	<b>September 1997:</b> -Composite attachments in orthodontics
<b>April 1993:</b> -Preadjusted appliances: One shoe fits all? (I)	

SFR, Pittsburgh, PA: "I really enjoy the technical and practical information. When you pick a subject, you really get to the 'wheat' of the matter -no chaff."

RJR, Redmond, WA: "Don't you dare stop sending the OMI. It's the best source of technical information of its kind; too bad there isn't enough time to comprehend everything, but at least it's there."

LL, Hellerup, Denmark: "We would very much like to continue receiving it"

SNA, Jr., Yorba Linda, CA: "We find it informative and interesting."

TDC, Consultant Orthodontist, Telford, Shropshire, UK: "Please continue to send me this interesting publication"

SS, Sacramento, CA: "Thank you for your service and your newsletter. You do an outstanding job."

BRJ, Elgin, IL: "It is a very informative newsletter"

GRH, Burnsville, MN: "I find the 'Insider' informative and interesting. Keep it up!"

CTD, Houston, TX: "Your review of self-engaging brackets in the December 1996 issue was very enlightening"

KS, Montreal, Canada: "Thank you for your very educational quarterly"

KA, Zurich, Switzerland: "I am highly interested to further receive 'The Orthodontic Materials Insider'."

BWE, Ft. Dodge, IA: "It's great and I feel you know what you are writing & studying about, and that the truth comes from you. Thanks for your continued work and efforts on behalf of orthodontists and the profession"

HSG, Belfast, Ireland: "I find it fascinating reading and look forward to it"

MFT, Pine Bluff, AR: "I enjoy reading your unique perspective on orthodontic materials"

GCM, Houston, TX: "Great newsletter"

MWJ, Pine Bluff, AR: "Please continue to send me your informative newsletter"

DG, Ft. Wayne, IN: "We enjoy it... we look forward to receive it in the future"

AWA, Oak Brook, IL: "I thank you for providing information that is not available from traditional sources. You provide a much needed service"

MWB, Houston, TX: "Brilliantly written"

CDH, Rockford IL: "I really appreciate receiving your newsletter 'Insider'. It is one of the best in the orthodontic world"

BG, Consultant Orthodontist, Plymouth, UK: "I find it a most interesting, useful and thought provoking publication"

MK, Sydney, Australia: "Many thanks for your information and background of the continuing battle with the large orthodontic manufacturers... I do not believe any of us within the profession is content with the concept that we are actively creating huge mounds of disposable garbage for our own planet"

FDW, Old Bridge, NJ: "We would just like to let you know that we think your newsletter is wonderful"

DSM, Huissen, The Netherlands: "Please keep me on the list. I would like to continue reading your quarterly"

SSM, Chattanooga, TN: "It is a great little newsletter- I appreciate your time to provide good information to the orthodontics profession as a whole. I look forward to your next mailing"

WEE, III, Durham, NC: "I have enjoyed reading your newsletter and would like to continue receiving it. Thank you and keep up the good work"

SJL, Peoria, IL: "I enjoy your publication. It gives me a very complete and technical materials review"

FJP, Manuka, Australia: "I feel it fills a void in orthodontic literature."

SY, Jerusalem, Israel: "Please continue to send me the INSIDER newsletter which is an important source of information on orthodontic materials."

LHE, Douglasville GA: "I enjoy and appreciate the information you publish in 'The Orthodontic Materials Insider'. The information is beneficial to a better understanding of the materials we use everyday in orthodontics. Thank you very much."

HAMP, Professor, Univ. of Stellenbosch, S. Africa: "Thank you for sending us copies over the last few years".

PWS, Sacramento, CA : "I should very much like to continue to receive this publication. I enjoy it... I am currently the orthodontic consultant for the Calif. Dept. of Health Services."

EMB, Short Hills, NJ and N.Y. University, NY: "I applaud your latest issue of 'The Orthodontic Materials Insider'. Your treatise on NiTi alloys was more complete & understandable than any article in any ortho journal or text... I personally do the lectures on metallurgy -this was great!"

MWA, Woodstock, IL: "I commend you for your excellent work"

HCW, Roanoke VA: "It's a great little newsletter, keep to good work".

AO, Oslo, Norway: "I have read your 'The Orthodontic Materials Insider' for March 1997 with great interest, as I have done with your publications for many years".

PS, Palos Heights, IL: "I do appreciate your efforts and the materials in these publications".

SG, Belleville, Canada: "I enjoy the articles and am very pleased with the information"

CCN, Bothell, WA: "I love the information you are sharing with us"

HJL, Walnut Creek, CA: "Please continue to send 'The Orthodontic Materials Insider'. I always learn something. I fondly recall your presentation to our study club."

SP, Professor, Univ. of Zurich, Switzerland: "I appreciate your contribution enormously and would be happy to receive 'The Orthodontic Materials Insider' in the future".

GLV, Tucuman, Argentina: "I am deeply grateful for the consignment of 'The Orthodontic Materials Insider'."

GMS, West Chester, PA: "It is very interesting, but many times the mathematical explanations are over my head. Thanks."

RFG, Pleasanton, CA: "I have enjoyed its scientific approach and look forward to reading it each issue. Keep up the good work. You properly assess the fact that there is not a similar or equal source of solid materials information available that matches the 'Insider'.

SJR & MJB, Winston-Salem, NC: "Our two orthodontists have read each publication for ten years now. It would be missed if it was not sent"

KS, Montreal, Canada: "I enjoyed receiving your publication and would appreciate if you would continue to send it to me."

DJR, Foster City, CA: "I have enjoyed it for years"  
FJ, Delemont, Switzerland: "I would greatly appreciate continuing to receive your esteemed 'The Orthodontic Materials Insider' publication."

BLMH, Nijmegen, The Netherlands: "I appreciate your articles very much"

MRT, Cary, IL: "Please continue to send me your unique publication, 'The Orthodontic Materials Insider.'"

BRJ, Elgin, IL: "It is a very good publication"

GNR, Long Beach, CA: "We enjoy Ortho-Cycle's 'The Orthodontic Materials Insider'. Please keep us on the mailing list."

DWC, Jr., Arcadia, CA: "I thoroughly enjoyed your publication 'The Orthodontic Materials Insider'... I find your articles informative and educational"

**"This fine quarterly publication has served a unique purpose. It fills a void that existed, until it was first published 10 years ago. I congratulate professor Matasa on his unselfish contribution to the art and science of orthodontics!"**

**Professor T. M. Graber**

Univ. Of Illinois at Chicago  
D.D.S., M.S.D., Ph.D., Odont. Dr., M.D., D.S.  
Recipient, Albert H. Ketcham Award  
Editor-in-Chief, American Journal of  
Orthodontics and Dentofacial Orthopedics

BP, Fareham, United Kingdom: "Please continue to send it to me, as I much appreciate it."

HJ, Buenos Aires, Argentina: "I am very interested in continuing receiving your Journal. It is like a Journal to me, and very useful to improve my orthodontic knowledge."

TRC, Dekalb, IL: "I enjoy reading your 'The Orthodontic Materials Insider' very much. It definitely fills a void in our literature... You are to be congratulated on your knowledge and insight and thanked for the work involved..."

TD, Shropshire, United Kingdom: "Many thanks for 'The Orthodontic Materials Insider' which I always find stimulating to read... Incidentally, I enjoyed reading your bold attempt to explain the behavior of NiTi alloys to a clinical readership. I appreciate the problems because as a former metallurgist I am often asked to lecture on the subject to UK audiences."

TEA, Bath Avon, United Kingdom: "I am writing to say that I would be most grateful if further issues of 'The Orthodontic Materials Insider' could be sent to me."

DEL, Ft. Wayne, IN: "Let me commend you on a tremendous article on NiTi alloys: Two metals in one...Your newsletter is indispensable"

KDB & FDC, Vancouver, Canada: "Our office has enjoyed receiving your newsletter 'The Orthodontic Materials Insider' for many years. We wish to remain on your mailing list, please."

CJR, Delta, CO: "Enjoyed your recent issue of the Insider and the commentary on the back page.. I'd be very grateful to be kept on your mailing list."

WHL, Laguna Niguel, CA: "I appreciate the work you have done and the information you send in that newsletter"

DGA, Newport Beach, CA: "You are doing an outstanding service to the orthodontic profession. I agree with you completely, in fact, a course in orthodontic materials should be a part of every post-graduate curriculum. I would appreciate continuing to be on your mailing list for your excellent publication"

CJL, Professor, Univ. de los Andes, Merida, Venezuela: "Due to the very interesting articles about materials and orthodontics, useful for teaching and dental practice, I will appreciate very much if you could continue sending me this very interesting newsletter."

KRB, Academic Centre of Dentistry, Amsterdam, The Netherlands: "We consider the topics discussed very to the point and almost always very interesting."

MUJM, Asturias, Spain: "Just a few words to tell you that we would like to keep on receiving the 'Insider'. If any charges are due, please let us know."

HJA, Austin, TX: "I have enjoyed your newsletter for years -please do not stop."

JGW, Chicago, IL: "I look forward to each issue"

CMJ, N. Rockhampton, Q, Australia: "I enjoyed your article on self-locking brackets"

HCG & FP, Ludwigsburg, Germany: "Would enjoy if you could go on sending us your 'The Orthodontic Materials Insider' journal. In one of your last 'letters' you had a beautiful and practical overview of 'self-ligating' brackets. Could you send me this Ortho-Cycle 'letter' again?"

WF, Deutschlandsberg, Austria: "May I ask you to continue to send me your Newsletter, which is quite interesting?"

BP, Lakewood, CA: "I find your newsletters very informative and share them with my associate and staff as well as the Grad students when I give my practice management seminars"

FBL, Palo Alto, CA: "I enjoy it and commend you for publishing it"

SGF, Lethbridge, Canada: "I very much enjoy receiving your 'The Orthodontic Materials Insider'"

VJ, Statesville, NC: "I enjoyed your 'Insider' issue on Ceramic Brackets. Please continue to send me your informative scientific presentations".

LJC, Houston, TX: "Very informative publication, and we value your service greatly"

WG, Royal Surrey Hospital, UK: "I very much enjoy reading your magazine 'The Orthodontic Materials Insider'."

MCJ, Senior lecturer, Univ. of Sheffield, United Kingdom: "I am just witting to say how useful the article in your March edition of 'The Orthodontic Materials Insider' is. I would be grateful if you could send me a copy of your most useful booklets whenever they are published"..

HDL, Edmonton, AB, Canada: "It provides information that is not currently available in research journals. Thank you for supplying our profession with your input. Cheers!"

PN, Lefebvre, Quebec, Canada: "It is not only appreciated, it is one of the only places where the truth is more important than making a sale".

LRB, Safford, AZ: "I thoroughly enjoy reading the articles that are presented. I very much appreciate the integrity that you demonstrate via scientific discussions of the issues. Thank you again for the information provided".

JS, Melbourne, Australia: "I greatly value this publication".

RPB, Muncie, IN: The articles are very informative. In my opinion, some of the leadership of the American Association of Orthodontists have a potential conflict of interest because of their relationship with the Orthodontic Manufacturers Association. Not everything the manufacturers want is appropriate for the orthodontists and their patients".

GPM, Philadelphia: "Your publication is superb and unequaled in the orthodontic materials literature".

SJR, Consultant Senior Lecturer, Bristol, United Kingdom: "I find this an extremely valuable, educational tool which I use frequently for postgraduate teaching here at the Univ. of Bristol".

RMR, Norfolk, VA: "The Orthodontic Materials Insider" has evolved into a superb newsletter. The layout and graphics are very attractive".

GTF, Wauwatosa, WI: "We think it is very informative and appreciate receiving it regularly".

OWSW, Blacktown, Australia: "I cannot thank you enough for all the material knowledge 'Phoenix without Ashes' and has taught me that the orthodontic training in USA has not. This knowledge has impacted upon my understanding... Your excellent work enables us to practice orthodontics in a manner sensitive to ecology, environment and purse string.

RED, Utrecht, The Netherlands: "I appreciate your newsletter".

KR, Academic Centre of Dentistry, Amsterdam, Netherlands: "We consider the topics discussed very to the point and almost always very interesting."

DB, Professor, Brasilia, Brazil: "Congratulations for your nice article about the NiTi wires. Its a great contribution for the understanding of this incredible material from the spatial age".

SMA, Downsview, ONT, Canada: "Your publication is important to me".

BB, Ipswich, Australia: "I appreciate your commitment to orthodontic materials information".

MWA, Woodstock, IL: "Please keep up your excellent research and reporting".

KMM, Professor, NY University, NY: "I (and many of my faculty and residents) read your latest 'Insider', which is, by the way, one of the best, yet...Equally impressive was your write up on evolution on self-tying attachments. Your idea to tape a timely topic and develop it into almost a reference article is excellent one and I encourage you to continue doing it".

CVR, Anderson, IN: "I have enjoyed reading 'Phoenix without Ashes' and the 'Insider' for years".

SGLS, Professor, Fac. Chirurgie Dentaire, Paris, France: "Always interested by your Journal".

**"I'm writing to congratulate you for your many achievements, beginning with the 10th anniversary of your own publication, 'The Insider,' and finishing with your recent study of the performance of orthodontic brackets that appeared in Orthodontics and Maxillary Orthopedics...."**

**I should add, however, that much less weight should be given to my own appreciations than to those coming from investigators working directly in the same field as yourself. In this respect, perhaps you should point out that the leading experts in the field of orthodontics are highly appreciative of your work. !"**

**Prof. Dr. G.E. Palade**  
Dean Scientific Affairs,  
Univ. of California S. Diego  
Nobel Prize for Medicine 1974

RC, Holte, Denmark: "As I appreciate your newsletter very much, I would be very happy to receive 'The Orthodontic Materials Insider' also in the future."

HNWT, Consultant Orthod., Univ. of Bristol, UK: "I would be most grateful if you could continue to send issues of your excellent periodical".

TG, Senderwood, S.Africa: "I found your publication extremely useful."

FRA, Liberal, KS: "...It is one of the better publications I receive".

SJ, Professor, Bristol, UK: "As a Course Director for a Postgraduate Programme, I find this update most useful and I would be very sorry if I was not able to receive it anymore".

BJA, Colorado Springs, CO: "Couldn't imagine not getting the 'Insider'".

KCN, Montgomery, IL: "I enjoy reading your articles, and find both the content and viewpoints very informative".

NRJ, Chicago Heights, IL: "Thanks for your informative professional publication".

KAJ, Olympia, WA: "I think it is very good!"

THW, St. Monica, CA: "I find your quarterly very helpful and interesting".

SK, Royal Dental College, Aarhus, Denmark: "I am very impressed by your publication... It is valuable to be informed of the materials of the products we are using. Your publication gives me the possibility".

BJA, Houston, TX: "I enjoy your newsletter very much".

PCT, Jr., York, PA: "I enjoy reading it and find it very informative".

SBA, Mallorca, Spain: "It is a very interesting publication which gives a lot of information of orthodontic materials that improve the orthodontic knowledge and skill."

RJG, Bristol, VA: "We do appreciate your hard work and the effort put into the 'Insider'".

OB, L'Assomption, Quebec, Canada: "I would like to commend you on such an informative newsletter."

RML, Glen Waverley, Vic., Australia: "Please continue to send me your excellent publication 'The Orthodontic Materials Insider'."

MDA, Houston, TX: "I find your publication to be very informative and I DO READ IT!"

PRS, Mount Royal, Quebec, Canada: "It is greatly appreciated."

CA, Barcelona, Spain: "In my position as Editor of 'Revista Espanola de Ortodoncia' I have had the pleasure to publish several of your articles. I look forward to have again this opportunity. Please contact me when you feel to have a suitable material to be published in our Journal, maybe together with IOK" (NB: Informationen aus Orthodontie und Kieferorthopadie).

AP & TF, Padova, Italy: "I'm reading the 'Phoenix' and now the 'Insider' both with pleasure and interest. I appreciate the independence."

GG, Okayama Univ. Dental School, Japan: "I read many of your papers about orthodontic materials and I have been fascinated by your thoughtful philosophy... it is my luck to talk and discuss a lot with you at Philadelphia."

BMP, Reading, MA: "This publication is one of the most informative publication which I receive and would certainly miss not receiving it. Keep up the good work and... Thank You."

HJ, Aalborg, Sweden: "I would be very grateful to remain on your mailing list so that I still can be able to enjoy reading your clever words."

LV, Indooroopilly, Q, Australia: "The information you provide in this magazine is most informative, and is of much benefit to my practice."

MF, Editor, Michigan Association of Orthodontists, Grand Rapids, MI: "Thank you for the newsletter that has proven to be packed with very useful information".

CY, Seoul, Korea: "I liked your articles a lot because they are very scientific and very nicely organized."

MDR, Bowie, MD: "It is a great newsletter."

BW, Ft. Dodge, IA: "I've already read most of the article concerning brackets I didn't know yet. Dr. Matasa -you are a genius in your work and I admire you. Had you been working on a cancer cure in the medical field, I am sure you would have succeeded. Keep up the fine work."

FSI, Kingston, NY: "I read every issue."

VLJ, Girona, Spain: "I am reading with interest your 'Insider' as I did with the 'Phoenix'. As a good example of the 'Insider's value, the article about Ni-Ti alloys make things clear in a simple way."

JS, Director Orthodontic Education, Eastman Dental Hospital, London, UK: "I should like to declare my interest in receiving the newsletter which I find extremely useful as a reference for my research which is in the field of orthodontic biomaterials, and in particular, frictional resistance. Be assured that each newsletter is thoroughly read by me before passing on to my postgraduate students."

BS, Professor, U. of Illinois, Chicago, IL: "I would like to thank you for forwarding the two articles concerning frictional resistance values of previously used brackets. They were very valuable to me in my review of an article submitted for publication concerning the same subject."

LBW, Editor, Australian Orthodontic J., Bendigo, Victoria, Australia: "I was most impressed with the article in the latest issue of 'The Orthodontic Materials Insider'."

LJC, Houston, TX: "I find it of significant value."

ML, Consultant Orthod., St. Luke's Hosp., Bradford, UK: "I would be most grateful if you would kindly continue to forward copies of 'The Orthodontic Materials Insider' to me, as I find them of great interest"

SP, Professor, University of Zurich, Switzerland: "I appreciate your contribution enormously."

CDH, Rockford, IL: "Best orthodontic scientific literature published".  
WR, Austin, TX: "We have found it to be a valuable source of information."

MAH, Murray, KY: "I have found it most informative."

WJL, Auckland, N. Zealand: "...I also have appreciated your quarterly newsletter 'The Insider' and previous editions. These have been most interesting and informative."

TTC, West Covina, CA: "I find it quite informative"

OLO, Solna, Sweden: "Having appreciated your publications since long... I ask your highly professional publication."

KLE, Ashland, MA: "I love it. I learn more from you than courses, colleagues and texts. Very informative. Your work is worthy of investigation work awards. Keep up the excellent work!"

SMH, Cote St. Luc, Quebec, Canada: "This is to inform you that I wish to continue receiving your excellent Insider Newsletter."

BG, Consultant, Plymouth, UK: "I find it a most helpful, useful and imaginative publication which helps me understand a great deal of what has often been a significant mystery... Very many thanks."

KCJB, Bedford, UK: "I greatly value the contents of 'The Orthodontic Materials Insider' which gives a fascinating, independent and impartial view of the materials I use"

## Would we be considered the Rosa Parks of recycling?

"The woman who changed a nation", "the mother of civil rights movement", Rosa Parks, made history December 1955 when she refused to give up her seat to a white passenger. She was arrested, jailed and tried. As a result of the public's opinion, her stand against racism became a symbol for equality. Her resistance to oppression was admired and prized: in 1984, she received the Eleanor Roosevelt prize and in 1995, the Parks Foundation was formed. Furthermore, a school and a boulevard were renamed in her honor, and a monument is planned.

Her story might well resemble ours. We stand for the practitioner's right to reuse whatever he believes fit from his armamentarium, for the right to recycle as opposed to dispose, as manufacturers would enjoy. As a result of our position, we have been slandered, threatened, brought to a law suit. While we are still far from being encouraged, federal agencies and professional organizations have started, after long and tedious debates, to accept the clinicians' right to reuse his tools and ours to continue what we were doing for twenty years. As the law operates by principles and not by specific instances, we have succeeded in enlarging the opportunities for recycling. In older times, many devices were reused in the absence and of appropriate means for decontamination: today, when the knowledges are deeper, manufacturers would like to have them wasted to increase their profits.

Our research has accomplished noteworthy contributions to protect the consumer. New attachments are analyzed and their defects such as corrosion susceptibility, mechanical weakness and shoddy workmanship are denounced. Do-it-yourself testing methods encompassing attachments corrosion susceptibility, strength, friction and impact resistance were and are devised. Overextended concepts within the preadjusted brackets or the prescriptions' accuracy were exposed. Microorganisms were found to feed

on adhesives and polyurethane elastomers to be cytotoxic. These results were published not only in this newsletter, but in over forty papers and innumerable conferences throughout the world, from India to Guatemala to Egypt.

### Our beginnings.

The first commercial recycling of an orthodontic attachment was performed mid 70's as an attempt to recover attachments made of the best steels remained unscathed after the orthodontic treatment. As a marked decrease in mechanical strength and corrosion resistance was found to follow the charring of the adhesive, a new process was used: the adhesive's dissolution. The results were so good, that we followed in 1978 with the first resale of used, reconditioned attachments. More and more practitioners realized that what they have done all along with the stainless steel armamentarium can be done also with their brackets, tubes, bands and buttons, once these are properly cleaned, decontaminated, checked and sorted. Within ten years, the proportion of the practitioners who reused their attachments was such that several manufacturers started a sustained vilifying campaign in the media and through their sales representatives. Both in the US and Europe, the Orthodontic Manufacturers Association (OMA) and the European Confederation of Medical Devices Associations (EUCOMED) have spent considerable resources to curb the trend. Many thousands of pamphlets were distributed and conferences about the liabilities incurred were held by lawyers. In 1990, according to the American Association of Orthodontists (AAO), 30% of its members were willing to report to their association that they use recycled brackets<sup>1</sup>. It is easy to assume that many didn't want to report following an NBC's-TV "Fight Back" broadcast directed against the practice.

As all these efforts didn't seem to affect the progress of recycling, one of the twelve members of OMA,

Ormco, sued in 1995 in federal court in Los Angeles, the largest and best known recycler and the new industry's lightning rod, Ortho-Cycle Company, for reusing single-use items and infringing their rights on US Patent 4,415,330'83, "Orthodontic bracket assembly".

### The facts.

Both Ormco's complaint, as well as a study from the University of Iowa which was misquoted and distributed by the manufacturers to thousands of practitioners, raised problems related to the recycling of the orthodontic attachments. In a letter dated January 1997 to its membership regarding the use of recycled attachments, AAO showed that this is a matter for each orthodontist to consider: "Decisions regarding diagnosis, treatment, orthodontic appliances used and other similar clinical decisions are best made by individual orthodontists in consultation with their patient". In a February 1997 update, the Ontario Dental Association has shown that a similar position was taken by Health Canada<sup>1</sup>, which represents the Canadian government. Their survey shows:

a. "It is not uncommon for certain dental and medical devices to be reused, provided appropriate infection control procedures are followed. For instance, dental handpieces and heart pacemakers are reused...

b. Scientific evidence indicates that there is no clinically significant difference in the effectiveness of recycled orthodontic brackets vs. new materials...

c. There is no evidence that any patient has been injured as a result of wearing recycled orthodontic brackets...

d. There is no evidence that recycled orthodontic brackets pose a public health risk...

e. Depending on the type of brackets recycled, there may be an insignificant reduction in bracket strength. However, studies have also shown that the same factors can produce an increase in bracket strength..."

### The trial.

Facing the charge, Ortho-Cycle presented two counterclaims: one for "patent misuse" and the other for antitrust violations (the Sherman Act). As a result, the case was withdrawn by the plaintiff just before the date of the scheduled trial, April 1996.

### Post trial events.

**August 1996**, a misquoted University of Iowa study on recycling was sent to thousands of practitioners by Dr. Kesling from TP Orthodontics and OMA. In this interpretation, the bracket slots were shown to be significantly enlarged during recycling. We analyzed the data, showing the bad faith behind the interpretation<sup>2</sup>.

**November 1996**, we invited a crew from the "Date-line" program (NBC-TV) to closely observe what we are doing. After filming everything from 9.00 to 6.00, we were told that the program will be aired within two or three months: it never happened.

**July 1997** we were investigated for some two weeks by FDA, which could not find any objectionable handling of the attachments.

**September 1997**, in a complaint in a Richmond, VA, court, Dr. Donald M. Fox, a diplomate of the American Board of Orthodontics, has alleged that the brackets he purchased from TP Orthodontics were faulty and led to the rebracing of 225 patients<sup>3</sup>. During the suit, the following were stated under oath by Dr. P. C. Kesling in regard to slot tolerance: "I don't think I would know the difference if I had a .0025 or a .005" difference. Not significantly different".

We would like to remind our readers that in the OMA letter to clinicians (August 1996)<sup>2</sup>, a variance of .0024" and .0051", as found by the Iowa University study in some recycled brackets, was considered a significant change, which impairs dramatically bracket performance. Coincidentally, Dr. Kesling from TP Orthodontics is also OMA's president.

### The redemption.

In a sequence of four notes dedicated to the importance of the materials orthodontist use, Ortho-Cycle's contribution was prized by no less than five luminaries in the field<sup>4</sup>. Today, we have not yet really felt the burden of being submerged by our own waste. Tomorrow, for sure, drastic measures will be taken not only against those who pollute, but also against those who encourage this. It is true, orthodon-

tic attachments are insignificant in volume and the amount of heavy metals released when, in the absence of oxygen, the stainless steel disintegrates, is small. The principle stands, however. If the manufacturers' efforts for waste and against recycling is not curbed in time, it will make the life of future generations wretched. Observing the speed with which attitudes change, we may be well alive to be honored for our efforts and pains to renew, as our newsletter headline states, not only tools, but also habits.

### References

1. Alberta Dental Association, Updater February 1997, Internet: [www.abda.ab.ca/u9702-4.html](http://www.abda.ab.ca/u9702-4.html)
2. Matasa CG, *The anatomy of a misrepresentation. The Orthodontic Materials Insider*, 1996; 9: 2-5
3. Kesling PC, *Statement in court, Case 3:97CV181*
4. Graber TM, Swain B & Vanarsdal R, Bimler HP, Kuffinec MM, "Punto de Vista Actual" series, *J. Orthopedics and Orthodontics Practice* 1996; 1(1); 1(2); 1(3) and 1997/2(2)

## OUR GUIDING PERCEPTS

"No one will be able to learn a thing if he is convinced that he already knows it"

**Socrates, 469-439 B.C.**

"Every craftsman should know well his tools, even though they may be words"

**H. de Balzac, 1799-1850**

"No army can overcome an idea whose time has come"

**Victor Hugo, 1802-1885**

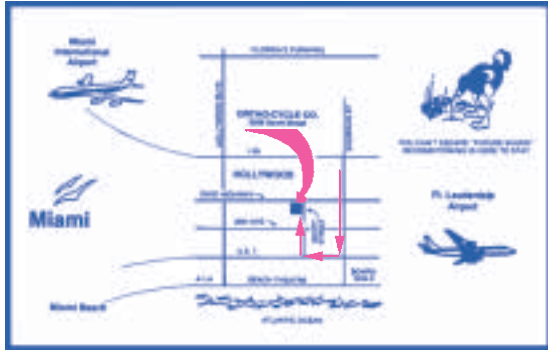
"Not until orthodontia is studied and practiced as a distinct branch of dentistry will it ever obtain success"

**E. H. Angle, 1855-1930**

# ORTHO-CYCLE CO.

2026 Scott Street  
Hollywood, FL 33020-2417 U.S.A.  
Phones: 1-800-82-CYCLE; (954) 920-9074  
Fax: (954) 921-4174  
E-Mail: Matasa@aol.com  
Please visit our web site at  
<http://www.orthocycle.com>

**BULK RATE**  
U.S. POSTAGE PAID  
**PERMIT NO. 427**  
SO. FL. FACILITY



## IS SOME ORTHODONTISTS' THINKING "ANTIQUATED" ?

For ten years, we have steadily written in this newsletter articles commenting on the biomaterials and devices orthodontists use, occasionally receiving their unsolicited thoughts. With the occasion of our jubilee, however, we will use the Roman custom ( Saturnalia, once year, also in mid-December) to reverse this by criticizing some of those we attempt to serve.

Some seven years ago, we started to wonder why many clinicians, when asked about their tools, didn't show any uneasiness when claiming that "only their girls know that."<sup>1</sup> Moreover, although a newsletter entirely dedicated to this topic was offered them for free, not many showed interest initially.

This attitude has old roots. Both Romans and Greeks believed that technology was degrading, being a business fit only for slaves, and no intelligent thinking man should bother with it. Archimedes even refused to write a book on engineering, giving as reason that everything that makes life easier was ignoble and vulgar. Greeks used mathematics only as a mental exercise<sup>2</sup>. The ancients' position toward inventors and materials was no different: the Egyptians and the Mesopotamians did not even record the names of their inventors. While Greeks recorded their names, they didn't try to apply their sophisticated inventions for the everyday endeavors and did not pay attention to the materials they used. As a result, their machines never worked properly. Romans did somewhat better: they did not invent new

technologies, but copied, applied and spread other people's mechanical devices throughout their empire. Their ideas of medicine were extremely unscientific, but surviving surgical instruments, made of rather improper materials, were extremely well designed for the work. Leaving the activities they didn't like to their underlings, when later on they switched to the nice life, led to their defeat<sup>2</sup>.

In contrast, early orthodontists were quite interested in technology and materials. Thus, E.H. Angle was an accomplished metallurgist, as he prepared German silver "in varying proportions according to the use for which it was intended."<sup>3</sup> His followers had their discussions directed toward "plain molar bands versus screw bands, German silver arches versus gold arches, different types of band materials and ligatures."<sup>4</sup>

Today, despite the fact that orthodontic dental materials are part of the accreditation standards for graduate education in orthodontics<sup>5</sup>, only a few universities teach them. The flood of products with which clinicians are daily assaulted probably makes them feel secure. The result has been summarized as follows by the technical leader of a major manufacturer (Dentaurum): "The orthodontist lacks specific knowledge in material science which condemns him to hesitation. In such instances, he relies upon his empiric experience, giving up the furthering of his knowledge.... For the manufacturer, it is always amazing to see how noncritical can the orthodontist be<sup>6</sup>..."

### References

1. Phoenix Without Ashes, December 1990
2. Hodges H, Technology in the ancient world, Barnes & Noble, NY, 1992
3. Angle EH, Treatment of malocclusion of the teeth. Angle system. SS White, Philadelphia, VII<sup>th</sup> ed.1907: 79
4. Mershon JV, The significance of the Angle school, Am. J. Orthod. Oral Surgery, 1939; 25 971-5
5. Am. J. Orthod. Dentofac Orthop. 1996; 110: 114
6. Sernetz F, Kiefer. Orthod. Mittl.1993; 7: 13-26

### Continue Your Free Subscription!

**If you have not received our last issue (dedicated to composite attachments), your name has been cancelled from our roster. You may continue your free subscription by asking it in a letter with your letterhead.**